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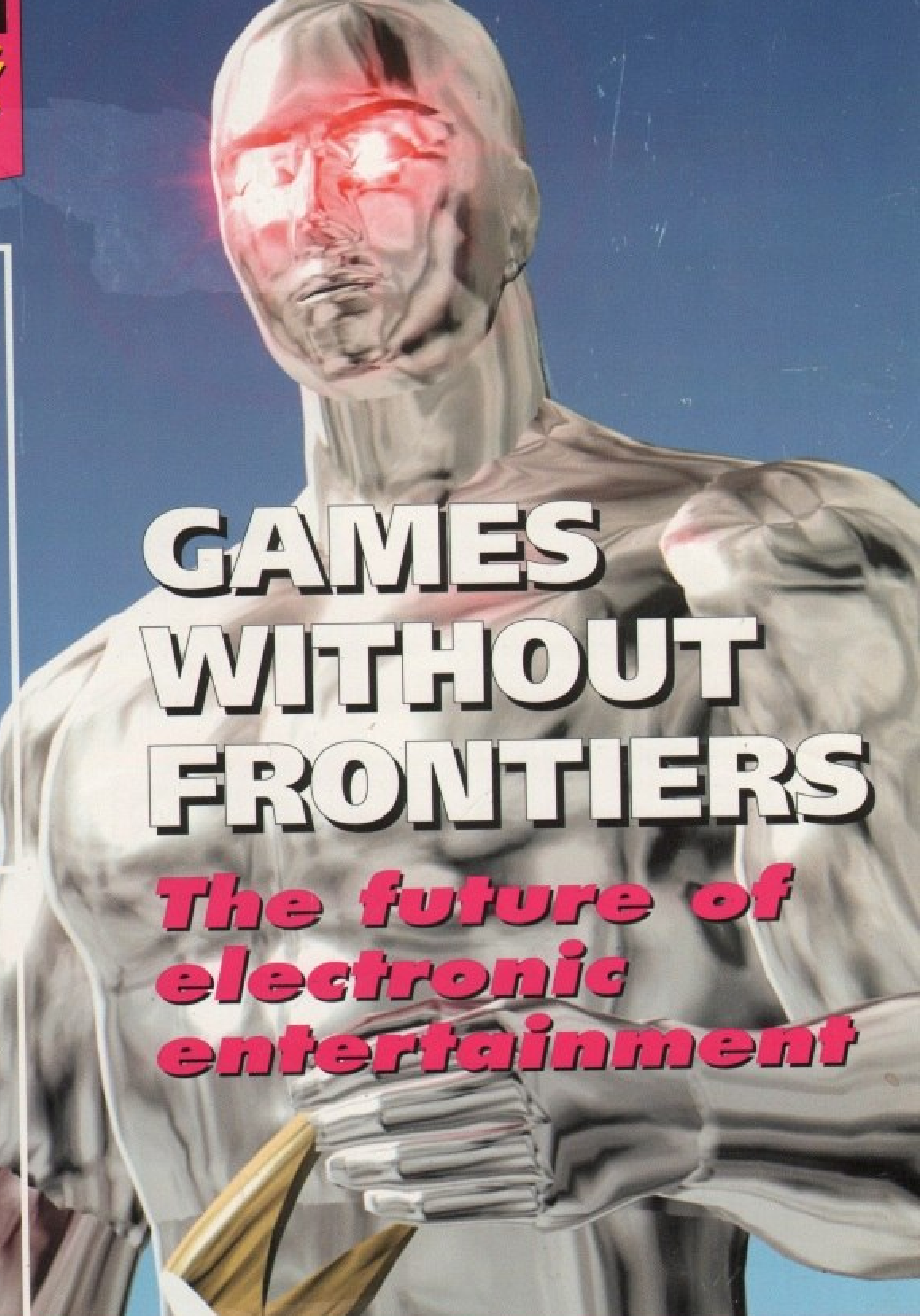
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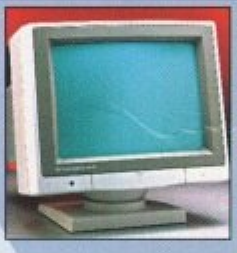
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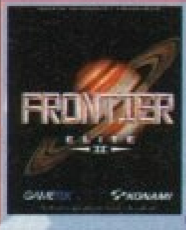
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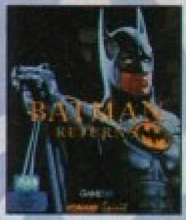
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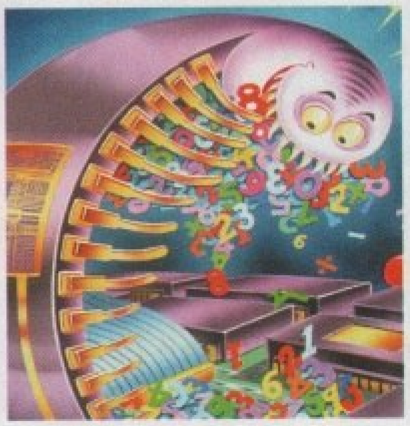
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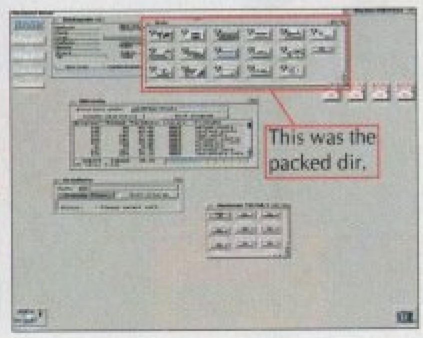
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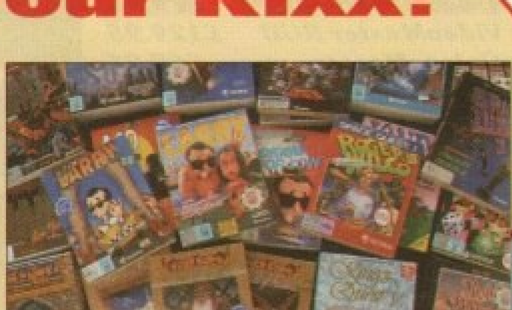
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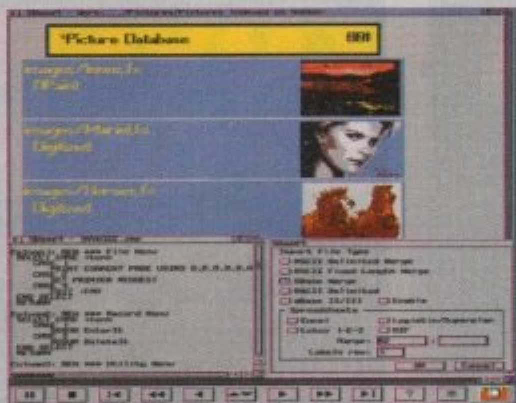
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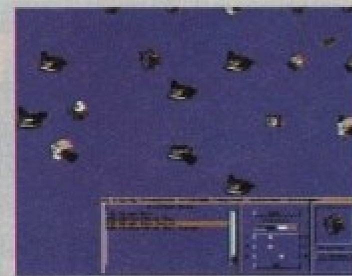
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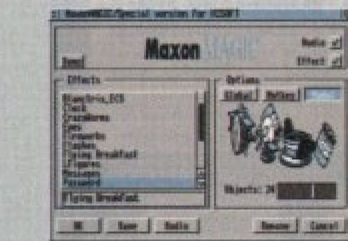
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Personal

Utilities

Maxon Magic





This is the utility that you simply must own! Maxon Magic is a funtastic combination of 15 different screen savers, a system event sound player and many amusing sampled sounds that will not only be incredibly useful but will give you and your friends endless enjoyment as well.



the 'eyes' screen saver module in action

The Maxon Magic screen saver works in all modes, even with graphic cards, and offers you a choice of 15 different amusing and entertaining modules such as *Aquarium, Flying Breakfast, Fireworks, Crazy Worms, Messages, Clock* etc. As if that isn't enough value for money, Maxon Magic also lets you assign sounds to most system events including Window/Screen open & close events, Alerts, Keys, Mouse clicks, Requesters and more. Choose from the many sounds provided or simply use your own sampled IFFs!

With Maxon Magic your Amiga will never look or sound the same again!

Video/Music

VIDEOMASTER



The best-value real-time video digitiser you can buy; VideoMaster gives you the ability to record real-time monochrome video with sound at 25 frames per second as well as quality full-screen stills from your camcorder or video recorder. VideoMaster RGB includes our new colour splitter, ColourMaster, and produces amazing quality colour stills.

VideoMaster AGA works on the A1200 and A600, connects via the PCMCIA slot for extra speed and freedom to use other peripherals, allows high quality stereo sound and supports HAM6 and HAM8 up to 640 x 512 resolution for stills.

ColourMaster

ColourMaster is a new electronic colour splitter which works in conjunction with VideoMaster for stunning colour stills.



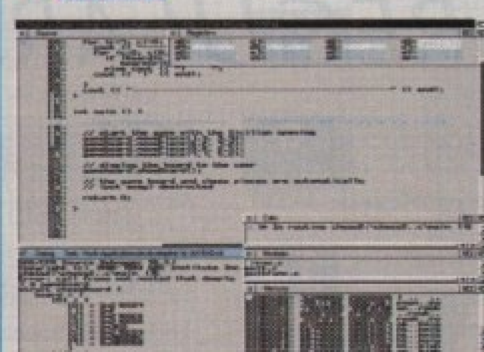
Clarity16 is our premier sound sampler allowing rates up to 32KHz in 16 bit stereo and up to 48KHz in 16 bit mono on an A500; accelerated machines can handle faster sampling rates. The software provides extensive features including full edit control, a MIDI keyboard emulator, a sample sequencer, many special effects and FFT analysis. Version 1.5 has an up-to-date Workbench 3 look, in its own window and is fully compatible with faster Amigas.

Megalosound is the new 8-bit, stereo, direct-to-disk sampler package; the software is packed full of easy-to-use editing features, special effects and extras such as the ability to print waveforms and sample information.

The package allows sampling up to 84KHz mono and 56KHz stereo to memory and up to 21KHz stereo to hard disk on an A1200. Supplied with a hardware volume control and an extensive 144-page manual, Megalosound is impressive value at only £34.95.

Programming

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00110110
11110000



SAS/C 6.5

The standard C compiler for AmigaDOS gets a major upgrade for 1994; now the SAS/C Development System (version 6.5) supports translation of C++ files with Streams and Complex libraries allowing you to write Object Oriented code.

The C++ translator is compatible with CFRONT Version 2.1 from AT&T. There's an improved peephole optimiser, more efficient stack extension and structure return code generation.

There are many other improvements including an enhanced instruction scheduler for the 68040 CPU and the 68882 maths coprocessor, an improved profiler, a friendlier interface to grep, support for C++ within CodeProbe and more. Workbench 3.1 include files are supplied. Upgrades start from £59.95 - please call for pricing information.

Prices

Clarity16 *new price*	*£129.95*
Megalosound	*£34.95*
VideoMaster A500	*£69.95*
VideoMaster AGA	*£79.95*
VideoMaster RGB	*£129.95*
ColourMaster	*£69.95*
SAS/C 6.5	*£329.00*
SBase Personal	*£129.00*
SBase Professional	*£249.00*
Maxon Magic	*£29.95*

All products on this page are either available now or by the end of January '94 - please call to confirm availability.

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NEWS

by John Butters

CD32 software hits top spot

CD32 software has become Britain's biggest selling compact disc games format, according to recent sales charts compiled by market research firm Gallup.

Just five months after the console hit the streets, its software has taken more than 38 per cent of the total CD games market, outstripping Sega Mega CD and PC CD-ROM.

Commodore's David Pleasance said: "It's taken us just a few months to dominate the CD software sales chart.

"That's a testament to the quality of the Amiga CD32 and the efforts of the software publishers.

"Programmers have only scratched the surface of 32-bit CD technology. The coming months will see even better games produced – and that can only increase our hold on the chart."

But the news is not all rosy for financially-troubled Commodore, with claims that disappointing Mega CD software sales rather than an increase in CD32's has caused the situation.

Industry sources say that PC CD-ROM has increased its market share during recent weeks at the expense of the Mega CD, while the CD32 has been static.

They also point out that combined software sales on compact disc still account for little more than three per cent of the entire marketplace.



Pleasance: Promises better games

Tower system coming our way

THE Amiga range will be extended further in the next few weeks when a tower version of the A4000 finally goes on sale, *Amiga Computing* can exclusively reveal.

It is due to be officially launched at the massive CeBIT information technology show in Germany – a year after it was first previewed – and will be available in Britain soon after the event.

The £1,949 computer has very similar features to its desktop sister, but also comes with a SCSI-II interface enabling data transfers between compatible devices at 10Mb per second.

The A4000T is fitted with a 68040 processor, 2Mb of chip RAM and 4Mb of fast RAM.

Commodore will not be supplying hard drive models, although some of the manufacturer's trade distributors will be able to fit disks without voiding the machine's warranty.



A4000T: Due for Britain within weeks

Moonlighter find British home

AMIGA owners will soon be able to buy US-based Moonlighter Software's range of utility programs in Britain from Ramiga International (0690 770304).

In addition to distribution, the Clywd-based specialist will be offering technical support and software upgrades to owners of the programs.

Titles heading our way include back-up program Ami-Back, tools software Ami-Back Tools and combination package Ami-Back Plus Tools. And TapeWorm-FS enables a SCSI tape device to be used as another AmigaDOS device.

Moonlighter vice president Hap Aziz said: "This will finally give our products the high profile we need where there is such a large number of Amiga users and enthusiasts.

"This is a win-win situation for both companies, but Amiga users outside the United States gain the most. We are looking forward to a long and fruitful relationship with Ramiga."

Video graphics go on show

THE cockles of visitors' hearts were warmed to the core by the sight of rack upon rack of broadcast video equipment at the Video Forum show held recently at London's Wembley Exhibition Centre.

Tritec were there with their Director II graphics board for video, which looks like a serious competitor for the Amiga Centre Scotland's Harlequin.

G2 had their range of genlocks and Scala UK shared their stand showing off Scala MM300.

But most interesting of all was DPS's stand, who had the Personal Animation Recorder (PAR) – basically a board with a fast hard drive on it that emulates a digital disk recorder.

PLONK

Take your 24-bit frames you rendered in Imagine, plonk them on the PAR and record them out via composite, Y/C or component video straight to any video recorder.

You no longer need a video capable of single frame recording – this baby will send out pictures at full frame rate!

With an optional capture card, you can even digitise up to five seconds of live video straight onto the PAR, touch it up on the Amiga and send it back out.

First PAL units should already be shipping and you can expect an exclusive review soon in *Amiga Computing*.

Among the interesting non-Amiga bits was Sony's new UVW range of Betacam cameras, recorders and players.

Betacam is a broadcast video standard used by many TV companies, and Sony have developed this new range of machines following the axing of their U-Matic SP products.

Viva la desktop video revolution!

New Software for a New Year

News briefs

Processing improves

IMAGEFX 1.5 has been upgraded to run specifically on EGS Spectrum, US-based Great Valley Products have announced.

The firm say the support brings the power of professional image processing to the high resolution 24-bit environment to deliver precise, fast and professional image processing.

It is available to all registered EGS Spectrum owners for $19.95. In Britain telephone Silica Systems on 081-309 1111.

Games to be rated

COMPUTER and video games makers have now agreed a system of self regulation designed to ensure responsible behaviour by the industry.

Under the system, games will be rated according to age suitability, a move aimed at allowing parents to make informed choices about the game playing of their children.

Shops, however, will still be able to sell young children titles containing sexual or horrific scenes that are considered ideal only for older computer users.

Monitors return

COMMODORE expect colour monitors to be available to Amiga owners within the next few weeks following a shortage which left Christmas buyers unable to find screens for their computers.

David Pleasance said that after being out of production for several months, the 1084 and 1942 models are again being made and should be in shops soon.

Emulation speeds up

FASTER PC emulation is now available for Amigas from German developer Vortex.

Their latest Golden Gate board contains a 486SLC2 processor which gives a Norton SI speed rating of about 85 – compared to 43 from the firm's standard 486SLC version.

The 486SLC2 is claimed to be up to four times faster than a 386SX processor, and the Vortex board comes with improved and faster software.

It will be sold by Britain by South Humberside-based Applied Systems (0652 688330) for £499.

Now you're talking...

EDUCATION specialists Ten out of Ten (0742 780370) have announced details of a range of Amiga software designed to teach foreign languages in an entertaining way.

It kicks off with 10/10 French, which follows the National Curriculum so that parents, teachers and pupils can monitor their progress within the grading system.

The program contains six colourful games including a word search and Invaders-type shoot-'em-up which take children aged between 8 and 18 years through topics covered at school.

It assumes a little knowledge on the part of the pupil, but according to the developer "starts at some very easy levels".

Project development manager Pete Davidson said: "We believe this package is going to improve everybody's French because we make learning fun.

"We supply points of reference for both teachers and concerned parents, and a nice twist is that even the manual is supplied in French."

The £25.95 package comes with manuals in French, English and a teacher version. It will be followed by German, Spanish and Italian programs by summer.



French: Kids learn with their Amigas

Getting to grips with GCSE

KIDS are now able to prepare for th GCSE examinations using new revisi software from Europress Software (06 859333), makers of the top-selling F School series.

ADI GCSE follows demand from pa ents for software aimed at helping th children at this key stage in their studi and will be available in three pack English, French and maths.

It is aimed at pupils in their fourth a fifth year of senior school, and each pa uses the space character ADI to guide s dents through the topics they will be co ering at school.

As the child works through activiti ADI offers help, encouragement, a praise for jobs well done.

"We have worked closely with teach and educationalists to rework the [AI range for UK students," said Europres Alexa Czechowski.

"The existing range has sold ov 50,000 units in the UK alone, its irresisti mix of fun and learning provi popular with children, parents and tea ers alike."

Each pack costs £34.99 and contai disks for 14 to 15-year-olds and 15 to year-olds.

New crackdown on porn by phone

LOOPHOLES in laws governing computer pornography will be closed by new proposals announced by home secretary Michael Howard.

They will make it clear that transmission of obscene material over bulletin boards and private computer links is a criminal offence under the Obscene Publications Act.

And "video work" and "video recording" will be redefined for the Video Recordings Act to include moving images stored for display on computers.

Both measures have been added to the Criminal Justice and Public Order Bill currently before Parliament and come after an earlier proposal to outlaw simulated compute images. This followed the discovery of a file containing a pic ture of a child's head merged on to a woman's body usin latest morphing techniques.

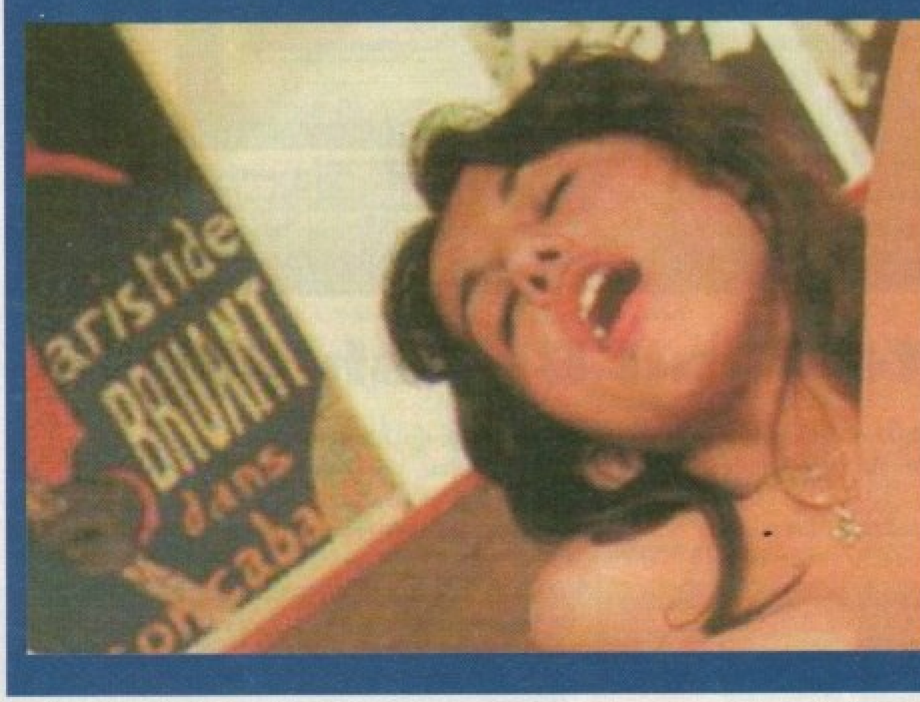
The Government also plan to make it easier for police t arrest traffickers in pornographic material and give ther extra powers of search and seizure.

"Those who trade in pornography are always seeking ne ways to distribute their vile material, exploiting new techno ogy and challenging the law whenever possible," said M Howard. "I am determined to do all I can to frustrate thei efforts at every opportunity. Thes proposals will help to prevent pornog raphers side-stepping the law."

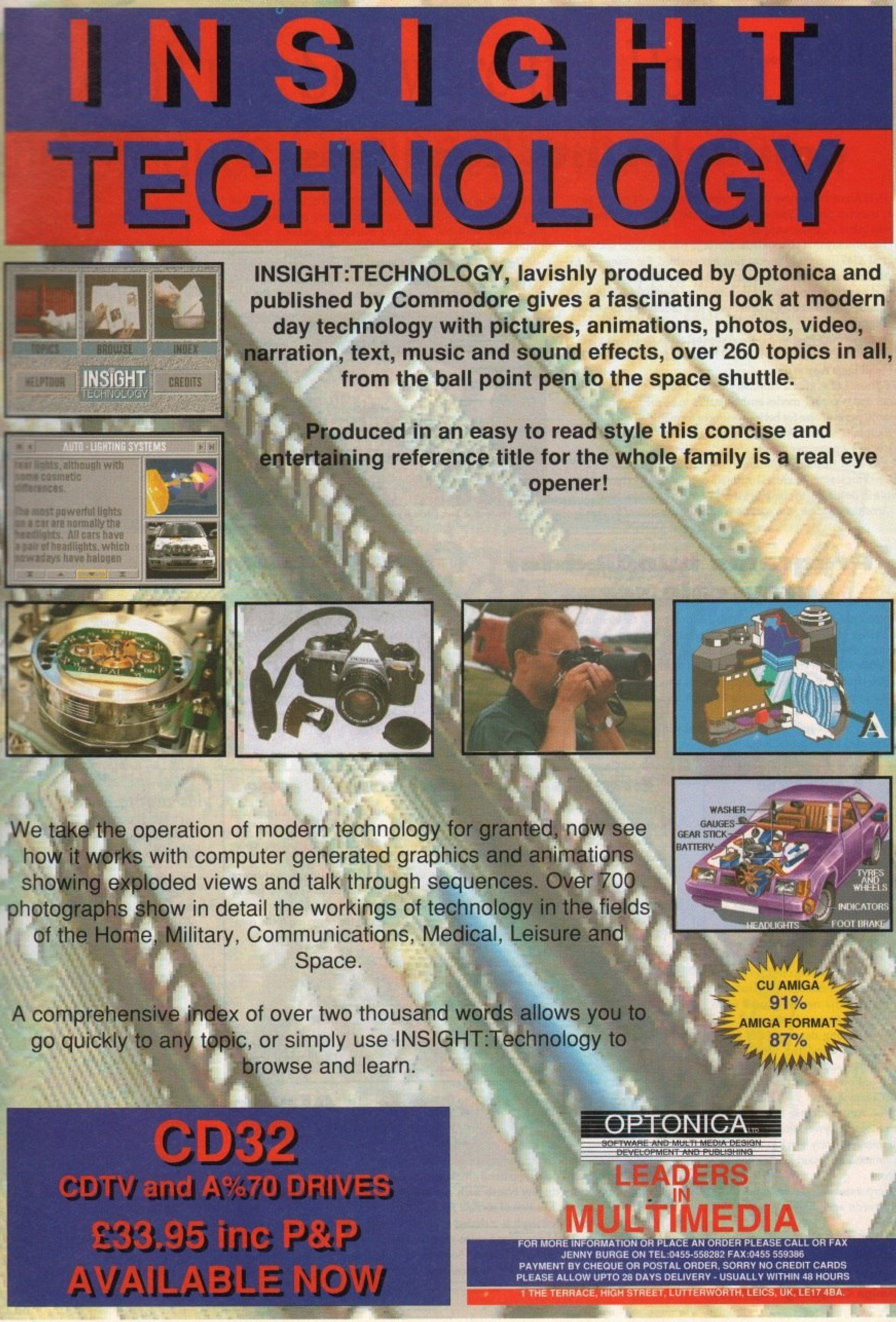
Police say the new proposals wi reinforce grey areas of the law, bu will not make detection any easier.

They say it is difficult for them t gain access to bulletin boards cor taining porn – and even harder to dis cover paedophile material.

People found guilty of a compute pornography offence could face up t three years in prison and a substanti fine, with the toughest penalties f those selling such material.



Porn: New Government crackdown


INSIGHT
TECHNOLOGY
INSIGHT:TECHNOLOGY, lavishly produced by Optonica and published by Commodore gives a fascinating look at modern day technology with pictures, animations, photos, video, narration, text, music and sound effects, over 260 topics in all, from the ball point pen to the space shuttle.
Produced in an easy to read style this concise and entertaining reference title for the whole family is a real eye opener!
TOPICS
BROWSE
INDEX
HELPTOUR
INSIGHT TECHNOLOGY
CREDITS
AUTO - LIGHTING SYSTEMS
WASHER
GAUGES
GEAR STICK
BATTERY
TYRES AND WHEELS
INDICATORS
HEADLIGHTS
FOOT BRAKE
We take the operation of modern technology for granted, now see how it works with computer generated graphics and animations showing exploded views and talk through sequences. Over 700 photographs show in detail the workings of technology in the fields of the Home, Military, Communications, Medical, Leisure and Space.
A comprehensive index of over two thousand words allows you to go quickly to any topic, or simply use INSIGHT:Technology to browse and learn.
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Colour prints cost less

PRINTER giant Star have cut the price of their SJ-144 colour thermal transfer printer and opened presentation centres aimed at giving better customer support.

The firm say that although the machine was launched last summer at £569, increased production has enabled the company to reduce it to £459 – less than many colour inkjet models.

But by using true colour pigments rather than liquid dyes, Star say the SJ-144's output is brighter than that of inkjets and will not smudge or fade.

In developing the printer, the company claim they paid particular attention to controls and paper handling functions to ensure the machine is easy to use.

Fifteen LEDs give a summary of the printer's status, while zoom and two-page modes enable images to be printed at 100, 80, 67 or 50 per cent size for better document formatting.

Output is at 360 x 360 dots per inch and it has a print speed in colour of 1.4 pages per minute.

It is sold through a nationwide network of "strategically placed" presentation centres, made up of retailers who have experience in dealing with computer users needing colour output.

According to Star, the centres will guide customers to exactly the right printer for their needs and will give a high level of support."Users now have a far greater choice of colour print-ing options available," said Star marketing manager Annette Tarlton.

"The SJ-144 Presentation Centres will work closely with the end user and give them the best possible advice on the best value colour method to suit their needs."



SJ-144: Production boost brings price down

Programs bundled for greyscale scans

THE latest hand scanner package from London-based Golden Image (081-365 1102) contains a range of software to give 256 greyscale-type results.

Among the programs packed with the device are scanning system AlfaScan Plus + OCR, while Merge It enables images up to A4 in size to be scanned.

Touch Up can be used to brush up pictures once they have been put into the computer, and can import and export images to paint and desktop publishing software using a range of formats.

The £135 bundle runs on any Amiga fitted with at least 2.5Mb of memory, and a hard disk is needed to run the OCR option.

Speeding up

EXCALIBUR is the name of two A4000/040 accelerators claimed to give the top-end Amiga speed increases of either 400 or 530 per cent. Although pricing remains to be fixed, RCS's British distributor Hydra Systems (0203 473333) expect to sell the boards for £763 and £1,351.

Centre promotes business Amigas

A NEW centre has just opened with the aim of promoting the use of Amigas in businesses throughout the country.

The Clywd-based Amiga Centre of Excellence will enable computer buyers to be shown solutions to their individual multimedia needs, from a wide range of hardware and software.

Many leading developers of products from around the world have pledged their support for the initiative, and it has been given a huge backing from Commodore.

"The Amiga Centre of Excellence brings together professional aspects of equipment at every level in the world of Commodore," said spokesman Bill Owen.

"Corporates will see multimedia for their needs and discover how it all works."

ACE can be telephoned on 0690 770304.

Effects software comes free

VIDEO effects software Video TimeLapse is now bundled free of charge with Optonica's Simpatica single frame rendering system.

It allows timed control of professional video decks to produce time lapse sequences such as flowers in bloom, fast clouds and sunsets and sunrises.

Triggering can be produced by various actions including additional hardware plugged into the mouse port. Owners of Simpatica v2 and later can upgrade free of charge.

For users of earlier versions the upgrade costs £49.95, and for newcomers the complete package is priced £350. Optonica can be telephoned on 0455 558282.



Simpatica: Now comes with effects software

Interface choice for ADPro

SEVERAL features have been added to ASDG's Art Department Professional including a choice of two user interfaces and extra support for third-party products.

Version 2.5 enables users to control the software through list or button-oriented graphical user interfaces, the option apparently making the program easier to use.

There is support for display boards such as Picasso, Retina and Video Toaster, Fargo's thermal printer, and the addition of six new file formats.

A program called Cinemorph is included to convert images between 24 frame per second film style and 60 field per second video-style time bases.

ADPro is sold in Britain by Meridian Software Distribution (081-715 8866) who sell upgrades for £41 and charge £199.95 for those new to the package.

DIARY DATES

April 16, 1994
Spring All Micro Show
Venue: Bingley Hall, Staffs
Organiser: Sharward Services
(0473 272002)
Last autumn's show boasted 70 exhibitors – some with Amiga software and hardware.

April 22 to 24, 1994
MEMS '94
Venue: Wembley Conference Centre, London
Organiser: Westminster Exhibitions
(0222 512128)
Britain's leading Midi and electronic music show, with many household-name firms attending

September 20-25, 1994
Live '94
Venue: Earls Court
Organiser: News International
(071-782 6893)
Commodore have already pledged their support for this large consumer electronics show.

October 6-9, 1994
BBC Big Bash
Venue: NEC, Birmingham
Organiser: Haymarket Exhibitions
Future World area of this big show will contain the latest computer games and virtual reality.

October 26-30, 1994
Future Entertainment Show
Venue: Earls Court II
Organiser: Future Exhibitions
(0225 442244)
The biggest public show of computer and video games players and a chance to see Christmas releases.

Overseas

March 16-23, 1994
CeBIT 94
Venue: Hanover, Germany
Organiser: Deutsche Messe
(010 49 511 890)
Europe's premier information technology show often used by Commodore for the launch of new hardware.

Denny Atkin with the latest news from the other side of the pond

What's new USA

Commodore support waning

It hasn't been a month of very good news for Amiga users over here. As this article was going to press, Commodore announced that they were pulling out of the World of Commodore-Amiga show, originally slated to take place in early April in New York City.

Commodore have been a major sponsor of the show (the only trade show dedicated to Amiga products in North America), and without the company's participation it wasn't viable to go on with the show.

Even though the Amiga's popularity has been waning for a while in the States, the WOCA shows remained popular and well-attended, and always produced plenty of new-product announcements to help keep Amiga users' spirits up. It's unknown at this point whether the Fall show in Southern California will also be cancelled.

In another blow, a caller inquiring about products with major Amiga developer Gold Disk was told that Amiga development was being dropped.

After that user posted the information to on-line networks, a Gold Disk representative posted the following clarification: "Contrary to this information, Gold Disk has not stopped support of their Amiga products. Gold Disk is suspending development of new versions of software pending further growth in Amiga's market share. To repeat, we are continuing support and will endeavour to solve problems encountered in current versions." So current Gold Disk product owners aren't left out in the cold when it comes to tech support and possible bug fixes like WordPerfect users were, but it's unlikely that Gold Disk will update Professional Page, Professional Draw, or their other products.

BRILLIANCE

Sources close to Digital Creations (of Brilliance fame) indicate that the company have switched to development for IBM-compatibles; we may still see Brilliance 2.0, which is reportedly largely complete, though. The final bit of bad news hasn't been publicly confirmed, but was reported in the ViewPort on-line magazine and verified by a source within Commodore. Apparently development of the AAA chip set has been suspended for the time being due to the costs associated with continued prototyping and development.

There are reports that Commodore have been experimenting with a prototype Amiga that uses an off-the-shelf Cirrus Super VGA graphics processor instead.

This isn't as far-fetched as it sounds: Commodore has said it's focusing on CD32 now, and the AAA chipset is too high-end (read "expensive") for a game machine.

Also, since Commodore has been talking about Risc Amigas running Windows NT as a possible future, it would make sense to go with industry-standard parts.

AAA was revolutionary when it was first announced in mid-1990 (yes, it's been in development for over four years!), but at this point Commodore can find off-the-shelf parts that will allow them to create a superior graphics machine at a lower price than a proprietary design.

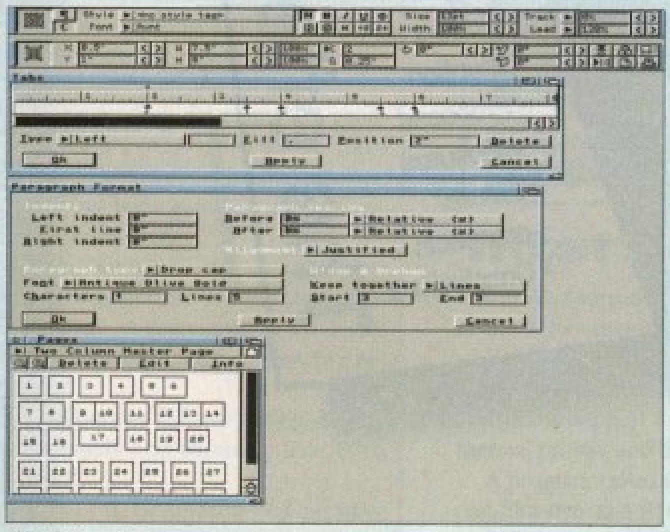
Rays of sunshine

On a brighter note, ASDG have just shipped Art Department Professional 2.5, a major upgrade to their cutting-edge image processor; Soft-Logik is finally nearing completion of their long-awaited PageStream 3.0 upgrade which promises to make Professional Page nothing more than a bad memory anyway; and a spectacular update to Oxxi's TurboText text editor is in the works.

ADPro 2.5 was mentioned in last month's column, but it's so cool I just can't stop talking about it. The specification sheets just can't get across how much easier the program is to work with nowadays. Check out the new user interface running on a 16-colour Workbench screen in Figure I. A more dramatic usability improvement is shown in Figure II, which shows ADPro's new compositing screen; you can now visually place elements on a picture in a screen mode of your choice.

And the incredible selection of ARexx macros for the included Fred utility give ADPro batch image-processing capabilities unmatched on any platform.

PageStream 3.0 has taken longer to wrap up than Soft-Logik initially estimated, but the program will definitely be worth the wait. I've had a chance to work with Alpha versions of the program, and it has many capabilities that are unmatched even by high-end Macintosh programs like Quark Xpress and PageMaker. A revamped user interface (see the accompanying screen grabs), long-document publishing features, Pantone colour support, and full AGA support are only a few of the features added.


Figure II

If you do find anything missing, a very complete ARexx command suite will let you add just about any capability imaginable. Professional Page users interested in upgrading will be overjoyed to learn that Soft-Logik is including a converter that will let you load your ProPage layouts into PageStream.

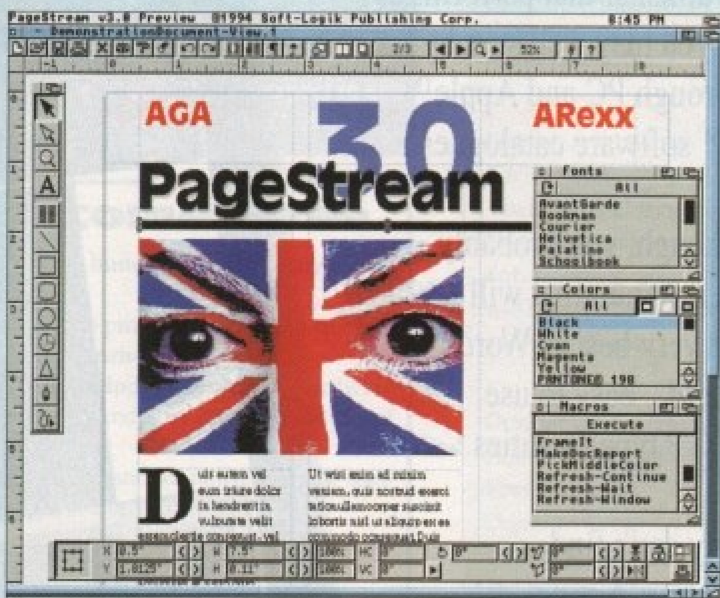


Figure I

UPDATED

Recent betas are looking very complete, and you should see the $395 package on shelves soon.

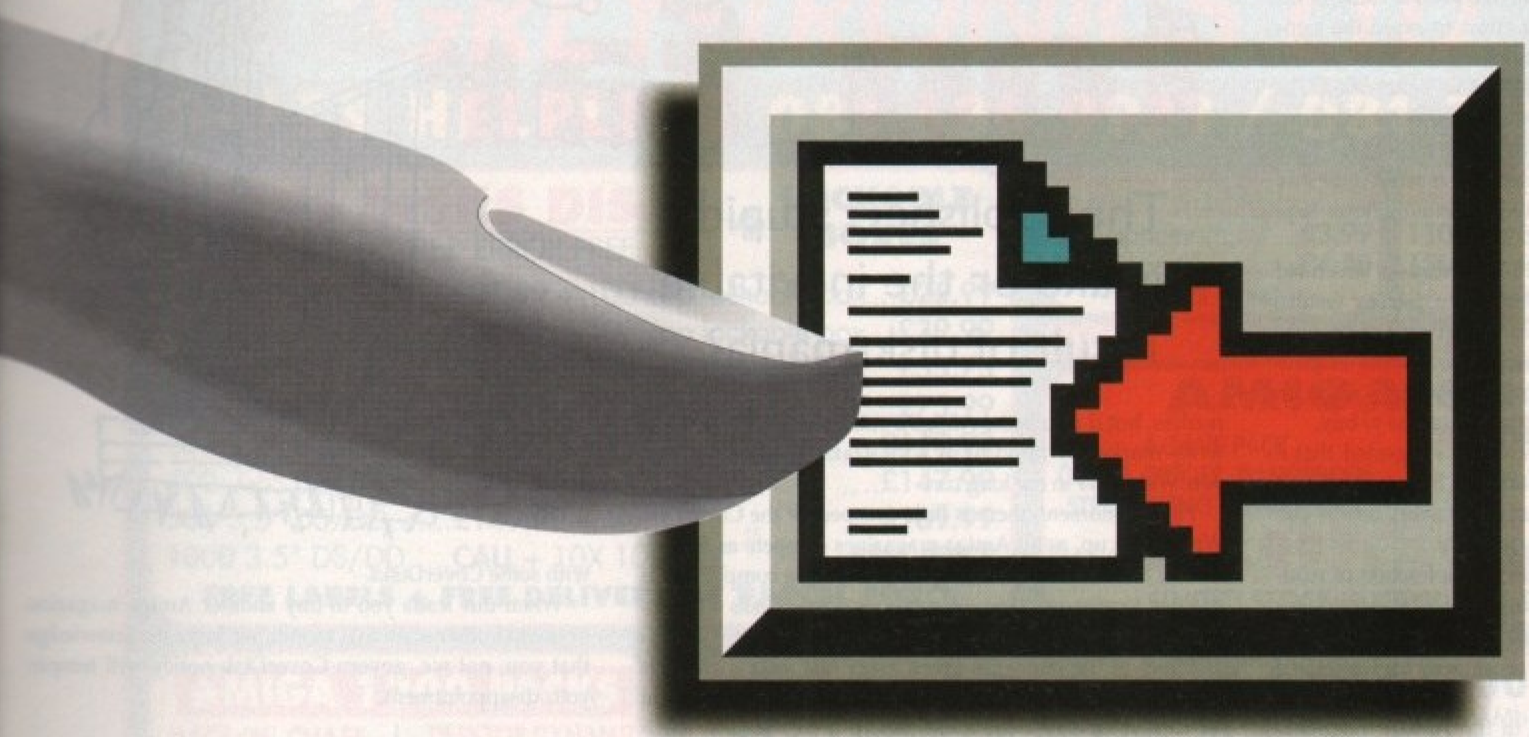
Finally, Martin Taillefer, who recently left his job as a software engineer at Commodore to go work for 3DO, told me that he's hard at work on an updated version of the TurboText text editor for release by Oxxi early this summer.

The fully-configurable editor was last updated in 1991, and INOVAtronics' Edge and ASDG's updated CygnusED Pro have threatened to usurp its position as the Amiga's premier text editor. Taillefer like a good challenge, though, and plans to pack lots of new features into this version.

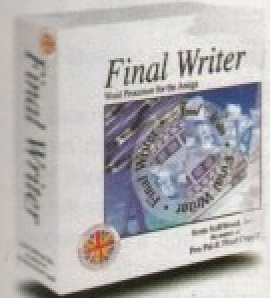
It's too early to list all the features, but among the new capabilities will be multi-level Undo, faster screen operation, and – this is revolutionary – the ability to use wildcards not only in search strings, but replace strings as well! Look for a hands-on preview in an upcoming instalment of this column.

You Can Now... with New

Final Writer™



Put *Your* Finger on the Buttons of the Ultimate Amiga Word Processor



From the publisher of the acclaimed Final Copy II comes its new companion, Final Writer - for the author who needs even more! If you already use an Amiga Word Processor, it won't include the complete and comprehensive array of features found in this latest addition to the SoftWood family.

Can your Word Processor...

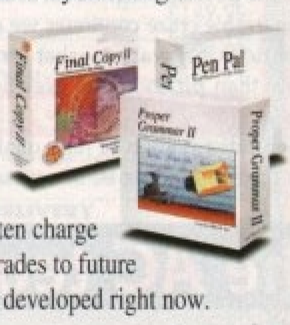
Output crisp PostScript™ font outlines on *any* graphic printer (not just expensive lasers), and was it supplied with over 110 typefaces? Import, scale, crop, view on screen and output structured EPS clip-art images (Final Writer is supplied with a hundred), again, on any printer? Also create structured graphics and rotate them along with *text* to any angle, giving you DTP quality presentation? Provide a huge range of printing options (eg. thumbnails, scaling, crop marks etc. on PostScript™ printers) and fulfil other advanced Word Processing functions easily such as automatic indexing, table of contents, table of illustrations and bibliography generation? With Final Writer, this is now available to you along with a list of features that just goes on and on. We know that you'll be impressed by this revolution in Amiga Word Processing, but don't be put off by it's advanced capabilities. With its complement of user definable Command Buttons and Superb Manual, Final Writer is simply one of the easiest programs to learn and use.

Adobe™ PostScript™
Superior font & graphical imaging technology.

Final Writer is not just a one-off product...

SoftWood are acknowledged as the World's leading software company publishing for the Amiga and no other system. So, if Final Writer exceeds your current requirements - whatever your Document Processing needs, whatever your Amiga - SoftWood will still have the Perfect Package for you...

Pen Pal or Final Copy II and Proper Grammar II...a Complete Range.



Once you become a registered SoftWood user, you'll gain access to unlimited *free* UK technical support (others often charge you or don't provide support at all) and preferential upgrades to future versions of these and other exciting new products being developed right now.

SoftWood

Quality software for your Amiga

If you've outgrown your existing package ask about our 'trade up' options from your current Word Processor (other publishers' WP's are eligible too).

SoftWood Products Europe

New Street Alfreton Derbyshire DE55 7BP England
Telephone: 0773 836781 Facsimile: 0773 831040

Available from all good dealers or, contact us for a list of nationwide stockists.
All information correct at time of going to press, E&EOE. All Trademarks acknowledged. The document on the previous page was output on a low cost Canon Bubble Jet.

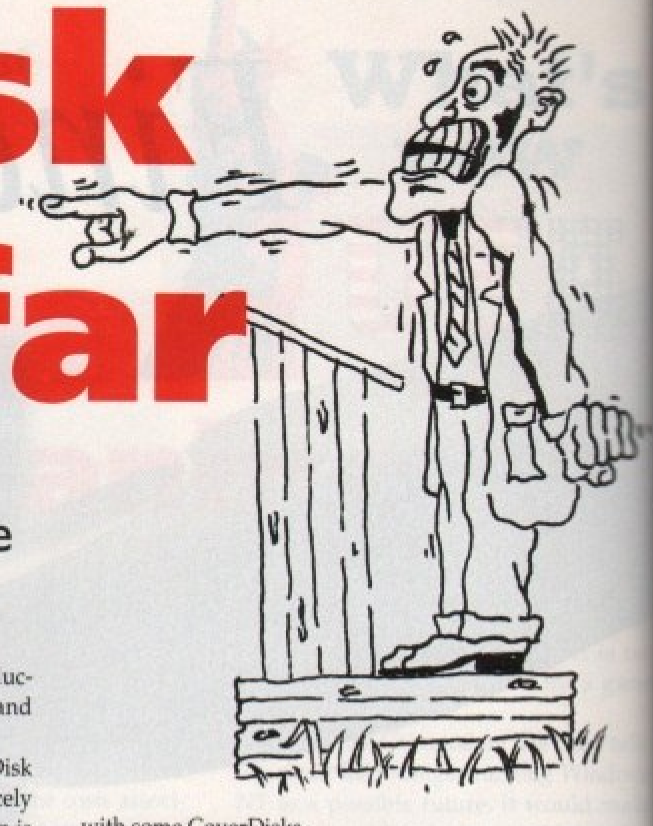
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ACO

A disk too far



The Publisher: stupid mistake or the inevitable result of disk-mania?

By now most readers of the February issue of *Amiga Computing* will have realised that The Publisher CoverDisk suffers from a few problems. The need for a second floppy drive, and the program's demands on system resources have left many users bewildered and feeling cheated.

Though we admit to a few errors on our part and hold our hands up to inadvertently not stating the program's requirements clearly enough, we have been reviewing the whole CoverDisk situation in an effort to avoid the same sort of cock-up happening in future.

Those of you who have contacted us concerning The Publisher will have already heard this, but for everyone else's benefit, we'd like to offer our apologies. The Publisher was not what our readers expected it to be and we are straining to ensure that this sort of thing never happens again.

Problem is, it was the pressure from readers which led us to use The Publisher in the first place. Survey results, for example, indicate that almost 90 per cent of you are interested in DTP, and a huge number of survey respondents indicated the supreme importance they place on CoverDisks when considering which magazine to buy.

In addition, the replies we received suggested that a sizeable proportion of readers (almost 80 per cent) had 1.5Mb RAM or more and that just about every one of you had either a second floppy or a hard drive.

Reader surveys, partly because only a fraction of readers answer them, are never an entirely accurate refelection of the market, but they are often the only hard evidence we have for our readers' preferences and level of equipment.

It is an accepted fact of life in the Amiga magazine world these days that if you don't give the readers some free commercial software, they'll buy the competition more or less no matter what articles, features, and reviews are to be found in that issue of the magazine.

During the middle of last year, when it became apparent that the supply of good CoverDisk software was running low, we were told, informally, that at least one other major Amiga magazine would welcome the chance to stop using commercial software altogether.

However, without the agreement of all publishers concerned it is impossible to impose this sort of voluntary moratorium.

From the industry's point of view, such a move is well overdue. For every CoverDisk containing a free graphics package, one potential high street or mail order sale is lost, and if the freebie craze continues we can expect to see the Amiga serious software market strangled much more effectively than piracy could ever hope to affect games software.

This legal distribution of high quality commercial software for next to nothing is, of course, a bonanza for the readers, but if it kills the Amiga's still very healthy productivity market by flooding it with gratis goodies we, and you, will suffer in the long run.

For the moment, there is little prospect of the CoverDisk War letting up, as all Amiga magazines compete as fiercely as they can for readers, but as long as intense competition is married to over-reaching expectations, CoverDisks will continue to pose a problem.

Many of the packages given away last year – and this includes those of our major competitors – were advanced packages requiring extra RAM, a hard drive, or other hardware to run properly.

GIVEAWAYS

Since the initial flood of giveaways, programs which run on an unexpanded 1Mb Amiga have become harder to find, and those which step forward as candidates are often of limited appeal.

This means that the programs most users could benefit from are not of as much interest to most readers as those which most readers wouldn't be able to utilise because of hardware requirements. Confusing, perhaps, but a fact of life we have had to live with.

Now that the situation has come to a head with The Publisher, however, we can ignore the paradox no longer. In future, we will strive to find software which most or all of our users can run without having to upgrade their machines.

If this means we can't at times find a package which matches the requirements of our readers (powerful and interesting to use, but capable of running on a standard 1Mb Amiga) you may find that no major freebie is included with some CoverDisks.

When this leads you to buy another Amiga magazine or not to bother at all that month, we hope the knowledge that you, not we, govern CoverDisk policy will temper your disappointment.

A tribute



Brian Redhead, one of Britain's most popular and respected journalists, died on January 23 after a short illness. He was only 64 years old, and for 18 years had been the voice of Radio 4's Today programme which so many of us treasured as our only friend in the morning traffic jam.

We can say nothing that has not already been said in the numerous tributes and obituaries which have appeared for Mr Redhead since his untimely death, but his loss was one which British journalism, under threat from tabloid excesses, privacy laws, and a censorious public and governmental mood, could ill afford.

He, his voice, his humanity, and his shining example of integrity and honesty will be sorely missed.

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We regret Amiga Computing cannot offer technical help on a personal basis either by telephone or in writing. All reader enquiries should be submitted to the address in this panel for possible publication.

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For six years *Amiga Computing* has been the leading magazine for Amiga enthusiasts. As a key member of the Europress magazine group, *Amiga Computing* promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

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2YR WARRANTY WITH CITIZEN

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Primera offers:
- Photo-quality, rich bright colours
- Up to 4 times faster than ink jet
- Cost per page less than ink jet.
- A4, transparencies + T-shirt transfer paper printing

COMPLETE WITH AMIGA DRIVER (WINDOWS OR MAC DRIVER IF PREFERRED) AND AMIGA LEAD £799.00
PHOTO REALISTIC KIT £209.00
PHONE FOR PRINT SAMPLES

§Studio driver/Utility (WB 2 & above) highly recommended ADD £39.95

SOFTWARE

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[illegible]	17.90
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• Also CDTV compatible
*up to 34.99 RRP

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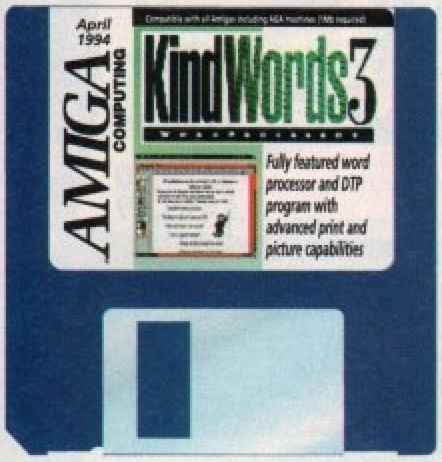
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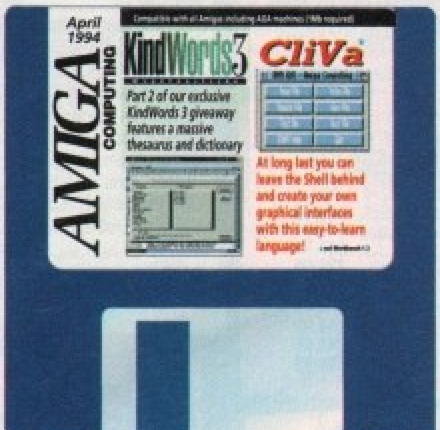
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the DISK

Kindw

Simple to use and extremely powerful, KindWords 3 from The Disc Company features all the best elements of word processing and desktop publishing





1Mb required

KindWords 3 is a fully functional word processor and page design application designed with the serious Amiga user in mind. It allows you to combine text and graphics in a single document and print the results, maximising your printer's output to produce high quality colour or black-and-white documents.

KindWords 3 features a massive dictionary and thesaurus to keep your documents grammatically correct and interesting to read. Whatever you're looking for from a word processor, KindWords 3 is bound to have it.

The entire KindWords 3 program resides over both of your CoverDisks. The program and dictionary are on disk 1 and the thesaurus and extras are on disk 2. You will need four blank disks in order to use the package.

Boot your Amiga using disk 1 and when the Workbench appears open up the *Amiga Computing* disk. Inside you will find two programs: Make-Program and Make-Dictionary.

Double click on the Make-Program icon and follow the instructions. Do the same with the Make-Dictionary program. Repeat the above procedure for disk 2; Make-Thesaurus and Make-Extras.

When you have finished you will have four disks making up the complete KindWords 3 package. If you have a hard drive you can install the program by running the installer on the Extras disk. In order to follow this CoverDisk tutorial, hard drive users will need to copy the Docs directory on the Extras disk onto their hard drives.

If you are using a floppy drive insert the KindWords 3 Program disk and reboot your Amiga. Double click on the KindWords3 drawer and then the KindWords3 program icon to load up the software. You're now ready to start!

Once KindWords 3 is up and running you will be presented with the main editing window, including an untitled page, a selection of editing icons and the top bar menu options. The first thing you need to do is load up a previously written document.

Go to the Project menu in the top bar and select Open. If you are running from floppy disk, insert the Extras disk and open the Docs drawer. Click on the Poem file and finally click the Open button. You should now have a document that can be edited. Single drive owners should specify the disk name Extras: in the file requester and then hit Return.

The first thing to do is familiarise yourself with the editing functions. Text editing is indicated by a cursor on the page which moves to the right as text is typed in. As soon as the cursor reaches the far-right margin it is forced down onto the next line.

Any words that split across the margin are word-wrapped to the line below. If you press the Del key, text after the cursor is deleted, while pressing the Backspace key deletes anything before the cursor – these are the basic editing functions.

However, we can affect more than a single character by using the selection technique. Go to the first character in the Poem document and click and hold the left mouse button. Now drag the mouse down. You will notice that the text becomes selected – inverse.

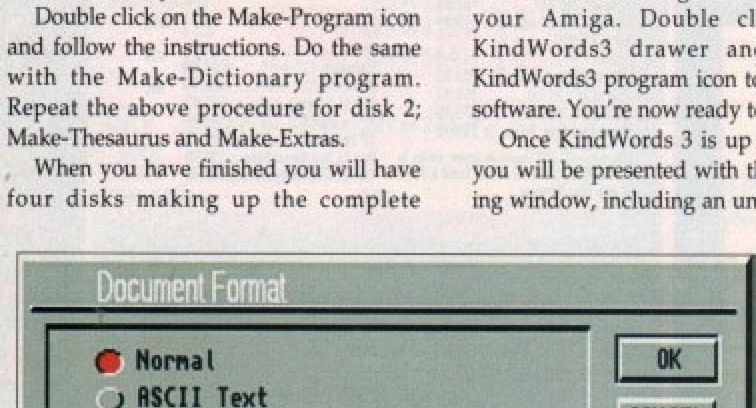
Pressing the Del key or Backspace key will result in the selected text being deleted. Using the selection technique allows you to perform actions on large amounts of text at a single time.

To save the text you must go to the Project menu and select Save As. Type in Poem2 in the Document window and then click on Save. The new document will then be saved to the disk or hard drive, whichever you are using.

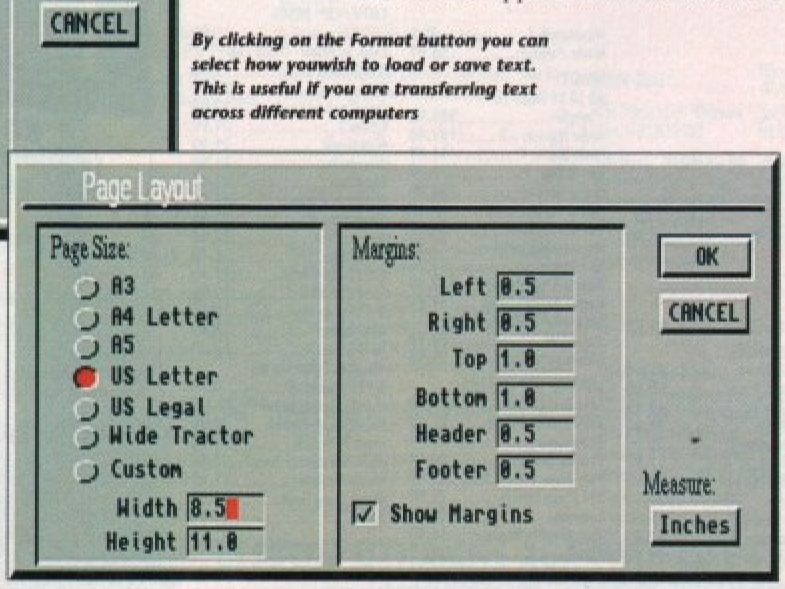
You can then regularly save the document using the Save option from the Project menu or by simply pressing the right-Amiga key and S. We will be covering more on the Save and Load requesters later.

Besides chopping and changing text we can also alter its appearance. Use the selection technique to highlight a line of text and then go to the Format menu. Select Typeface and you will see a list of the fonts presently loaded in the document. You can select one of these fonts or you can choose another by selecting Other.

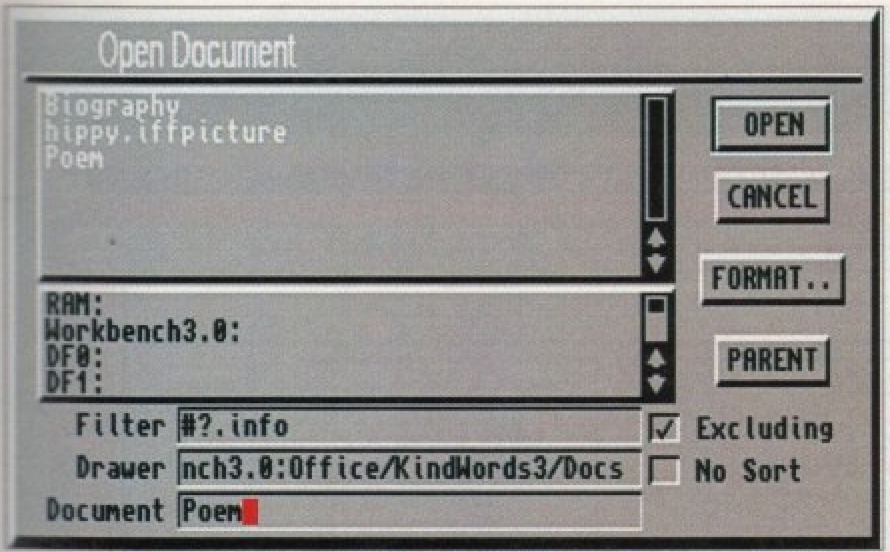
If you select Other you will be presented with a list of different fonts which you can load in. You can view each one from the Typeface requester by clicking in



By clicking on the Format button you can select how youwish to load or save text. This is useful if you are transferring text across different computers



The Page Layout requester allows you to select the size of page you want to work on. If the right one isn't available press the Custom button and type in your own values



You can open and save your documents either as a KindWords compatible file or as an Ascii text file

...ords 3

the Show button. When you have chosen the one you want the selected text will change accordingly. Using different fonts within a document can make it clearer and more interesting to read.

You will have noticed in the Format menu that you can also make text bold, underlined and even italic. These formatting commands are useful for producing titles, subheads and captions. To try them out highlight some text and then select them from the menu – Plain returns the text to its original state.

KindWords 3 comes with a vast dictionary which you can use to improve the grammatical state of your document. To load the dictionary, position the text cursor at the point in your document from which you want to begin spell checking and select Spelling Checker from the Utilities menu.

A requester appears asking you if you want to check the last word typed in (Check Word) or the entire document (Check Document). If you click on Check Document the spell checker will start comparing words on the page against those in its dictionary. If it cannot find it a requester pops up displaying the unrecognised word.

At this point you can either type in the correct spelling and click on the Change button; choose to Ignore it or Ignore All occurrences of the word; or select the correctly spelled word from the dictionary's suggestions and click on Change. If the word is correct and the dictionary cannot recognise it, click on the Save button which will add it to its database. When the spell checker has reached the end of the document it will tell you.

Like the dictionary, KindWords 3 also features a massive thesaurus which you can use to improve your parlance (don't know what it means? Use the thesaurus!).

To invoke the thesaurus select Thesaurus from the Utilities menu at which point you will be presented with the requester. Type in the word you are looking for in the Look Up window and hit the Return key.

The thesaurus will display any synonyms associated with the word and whether there are any verbs, nouns or adjectives. You can click on these suggestions for further reference. Click on the Replace button to add the new word to your document or Original to skip back to the first word you typed in. Easy, eh?

Detail

The last and probably most important element when editing in KindWords 3 is the Document Info option. Select the Document menu and then Document Info which will produce a window describing your article in detail.

From here you can find out how many words you've typed in, the amount of paragraphs, lines, characters and pictures as well as the time you have spent editing the document. If you want information on selected text simply click the Selection button in the Document Info window.

Now that you are comfortable with the basic editing options KindWords 3 has to offer we can move on to the more advanced features. In the following section we will explain how to personalise your copy of KindWords 3, print documents and alter the page style.

Personalising KindWords 3 is a simple matter of selecting the Preferences option in the Extras menu. From here you can toggle the rulers on and off, change the amount of colours available and instruct the program to save at regular intervals.

Using the Preferences is simple and requires little explanation. Remember, once you have altered the Preferences file make sure that you save it so that it is the same the next time you load KindWords 3.

When you save the preferences a file requester appears asking you where you wish to save the file. Simply click on Save to overwrite the defaults.

As mentioned earlier, KindWords 3 is not just a word processor, it can also handle picture files – IFFs, which can be manipulated in various ways and printed out.

In the Docs drawer there is a sample picture entitled hippy.iffpicture which we can load into our Poem document. From the Utilities menu select Place Picture and from the file requester select the image and then click on Place. You will then be presented with the Picture Requester.

This allows you to change certain effects when the picture is placed in the document. Text Flow specifies how text fits around it – None will place the picture directly over text, Vertical will force text to flow straight down while Contour will mould it around the image.

Colour 0 indicates whether or not you want the background colour to be transparent or opaque and the Stand Off dictates how closely the text flows around the picture.

When the image is loaded it will use the palette used by KindWords 3 but you can instruct it to use its own by clicking in the Use Pic's Palette box. However, this will alter the colours employed by the program and may produce an undesired effect.

Once you are happy with the picture settings click on the OK button. The picture will load showing a cartoon man leaning against a wall. On each corner of the picture box are drag points. Pulling these will alter the dimensions of the box and either shrink or expand the picture.

Holding Shift down while moving the drag boxes will result in the picture being sized proportionally. If you are unhappy with the original settings simply double-click on the picture and the Picture Requester will reappear.

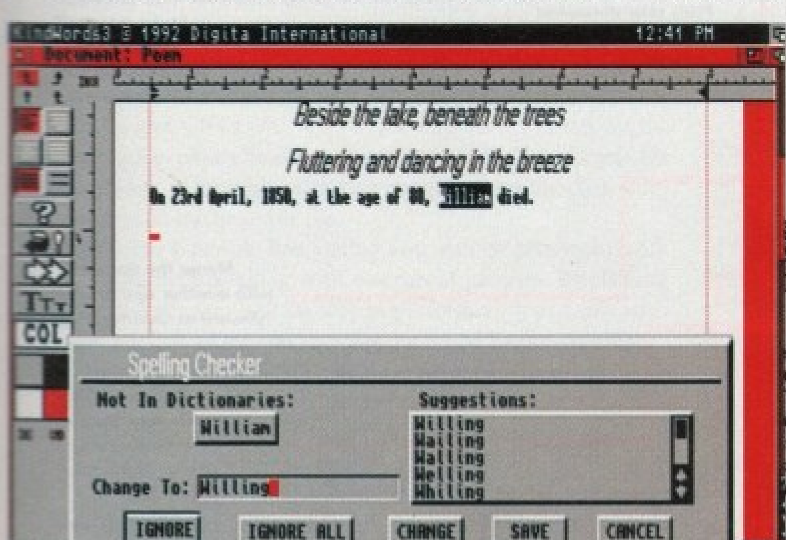
Fortunate

The default page settings used by KindWords 3 might not always be what you want. How fortunate it is then that the program offers the ability to totally define your own pages. To enable page editing select Page Layout from the Document menu. A window will appear with various options for changing the page size and the margin widths.

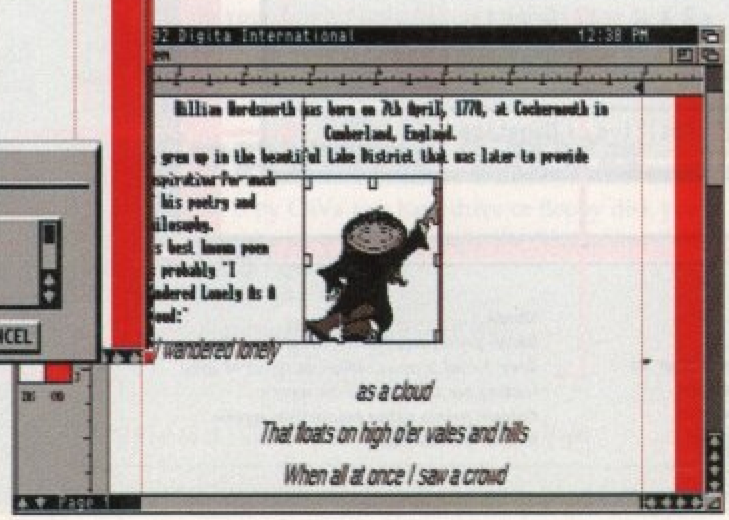
To select a new page size simply click on the appropriate button. If the dimensions you want are not available as a default you can click on Custom and enter your own values. The margins, header and footer can also be altered by typing in the required values in the boxes. When you print out your document the margins dictate how snug to the edges of the page the text is.

The default measurement format for the Page Layout option is in inches but you can change it to centimetres by clicking on the Measure button.

When you load or save a document you ➤

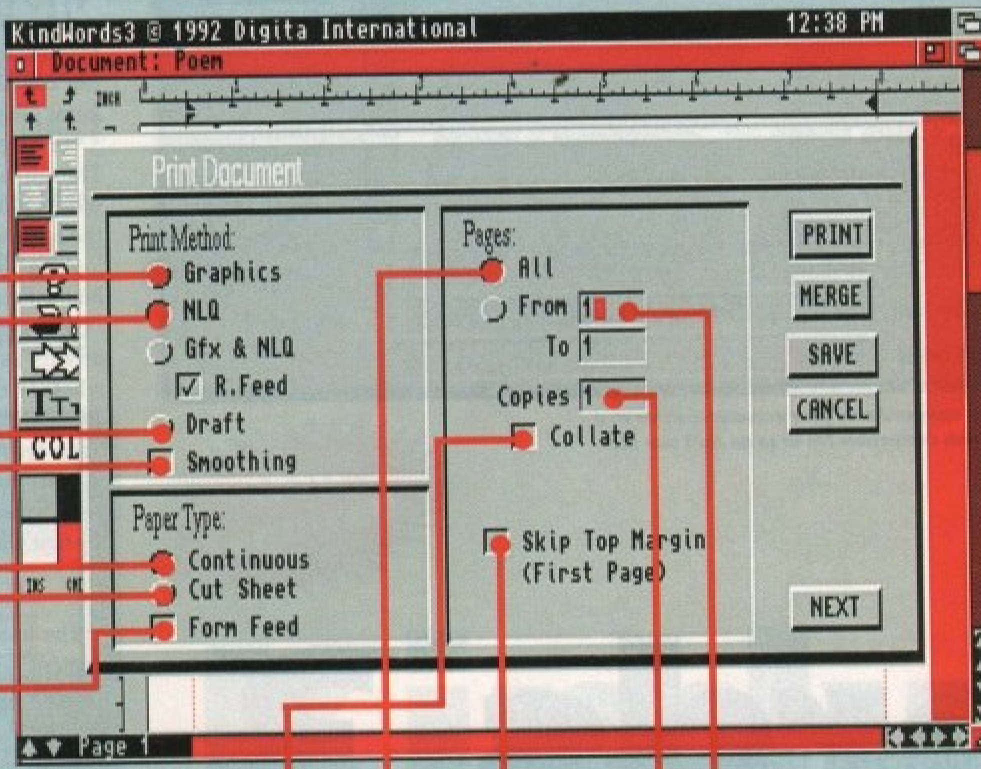


KindWords 3 features a comprehensive spell checker which will search through your document correcting any mistakes



Pictures can be enlarged and reduced or sized proportionally and you can use the picture guides to place images accurately

The fine print



Graphics
Prints the document as an entire graphic dump, including all the fonts and pictures on the page

Graphics & NLQ
Prints NLQ (Near Letter Quality) using your printer's in-built NLQ fonts, returns to the top of the page and then prints the graphics

Draft
This is the same as NLQ but uses your printer's faster draft mode. This is useful for making quick draft copies before final printing

Smoothing
Attempts to reduce the jaggy-edge effect when printing graphics or fonts. The printer resolution must be greater than 180 x 180dpi

Continuous
Prints pages on continuous stationery without pausing

Cut Sheet
This option forces the printer to pause at the end of each printed page

Form Feed
KindWords 3 will form-feed at the end of each page. This is more accurate than using line-feeds

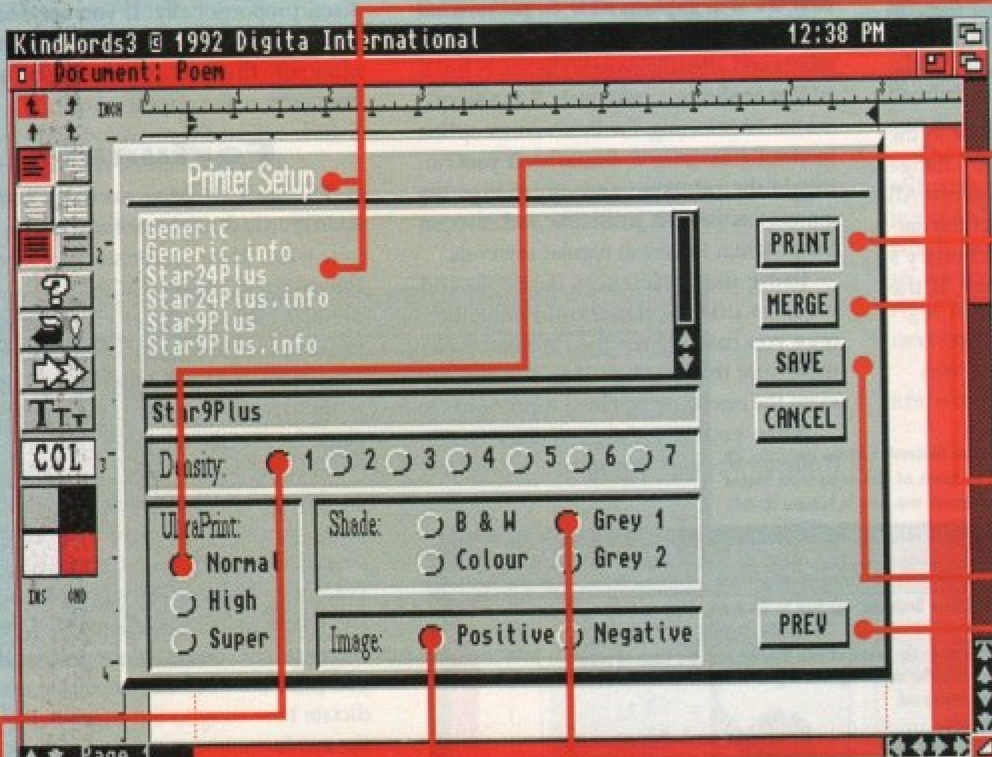
All
Prints all the pages in the document

Collate
The collate option prints copies in sets. Five copies of pages 1 to 10 will print from page 1 to 10 five times instead of printing five copies of page 1, then five copies of page 2 etc.

Skip Top Margin
Begins printing the first line of text at the very top of the paper

From
Allows you to select a range of pages in your document to be printed

Copies
The number of copies of each page



Printer Setup
Select the correct driver for your printer

UltraPrint
Produces much finer definition for graphics and characters
Normal=Normal screen resolution
High=Normal screen resolution x2
Super=Normal screen resolution x4
In order to use Super or High you must have the following UltraPrint fonts installed:
Blake-sans serif
Coleridge-serif
Byron-felt-tip pen
Worbles-symbol

Print
Print your document using the present settings

Merge
Merge the document with another and print it (known as mailmerging)

Next / Prev
Move between the two Print Document requesters

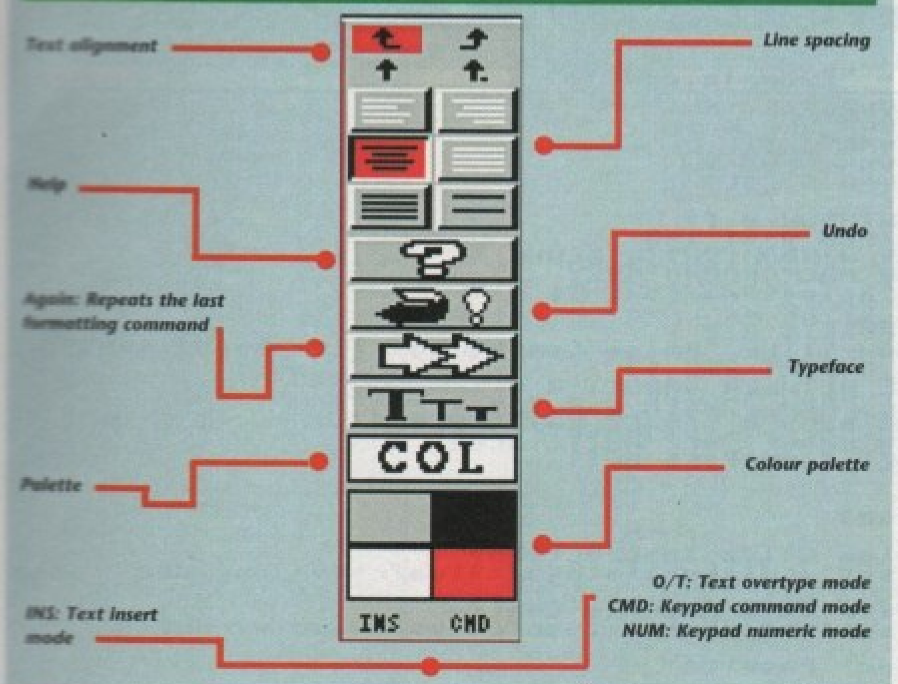
Save
Save the current setting and quit the Print Document requester

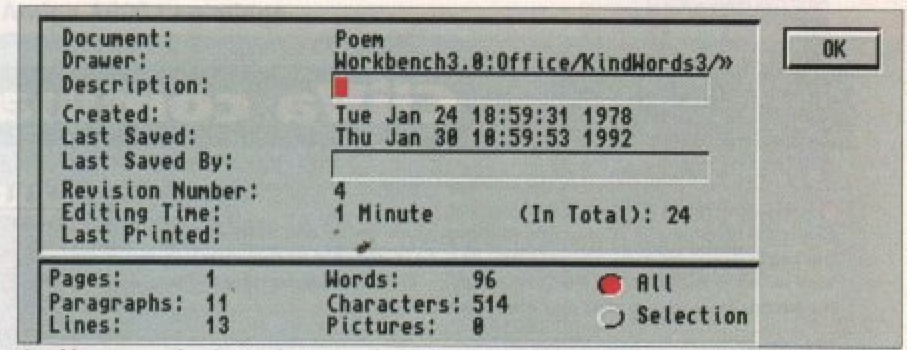
Density
Sets the printer resolution for graphics between 1 (low) and 7 (high)

Image
Positive: print image as seen on the screen
Negative: reverses colours on screen

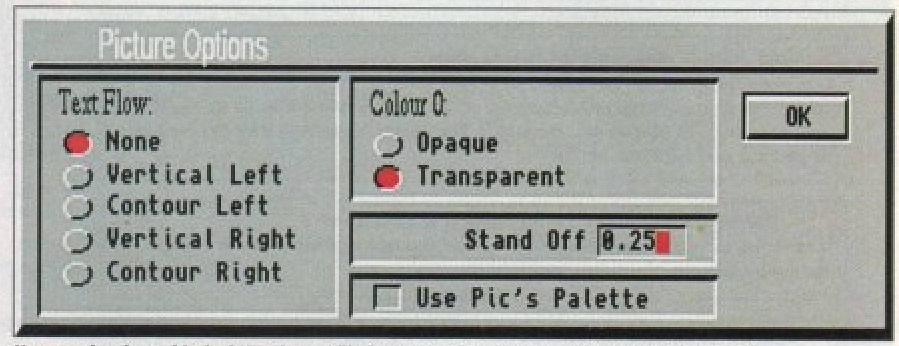
Shade
B&W: prints solid black or white only
Grey 1 and 2: uses different types of grey scaling for the colours on screen
Colour: prints using colours on screen (colour printer only)

Button bashing!





Anything you need to know about your document can be accessed via the Document Info option. From here you can see how many words you've written as well as other valuable information



You can load any kind of IFF picture file into your document to add visual references. There are plenty of options suitable for all manner of picture formatting

can choose to save it as a KindWords 3 document or as Ascii text. A KindWords 3 document can only be viewed by the program but an Ascii file can be viewed by any text reader such as More, MuchMore or PPMore (picture files will be ignored). Click on the Format button on the file requester and you will be able to select the appropriate options.

KindWords 3 comes with a help facility which explains the program functions in detail. You can call up the help mode by selecting Help from the Extras menu. Simply select the topic you want more information on.

Once you are happy with the presentation of your document you can go about printing it. KindWords 3 makes printing your document a fairly straightforward procedure.

To get to the Print Document requester select Print from the Project menu. The requester may look fairly daunting but it does cater for all types of printing and can force even a 9-pin dot matrix printer to produce some pretty spectacular results.

However, the best advice for producing good quality printouts is to experiment with the Print Document settings until you are happy with the results.

To explain in-depth about the printer options would take too long, but you'll have noticed a brief description of each function in its own box on the previous pages, which should help you to produce some excellent results on paper.

not WB 1.3

CliVa v2.0

Author: Christian Warren

Mention the Amiga Shell and most people will run in fear. The Shell is probably the most avoided element of the Amiga Workbench yet it is certainly the most powerful and quickest interface there is when dealing directly with the operating system and the way in which it works.

For all of you out there who dread the name Shell, here is a superb utility that will allow you to perform all manner of advanced operations without ever loading the Shell up.

CliVa is a utility program that allows you to create a gadget-controlled interface from which you can load programs, copy disks and perform all manner of operations previously only accessible via the Shell.

You will find the CliVa program on disk 2. Open up the CliVa drawer and inside you will see three files – CliVa, Example and CliVa.Doc. CliVa.Doc has been written by the author and explains how to write CliVa config files. As an idea of just what is possible with this program, double-click with the mouse on the Example file.

When the Example has loaded you will be presented with the CliVa interface along with a series of gadgets. By clicking on the gadgets you will be able to perform various tasks such as viewing CliVa.Doc and viewing the actual Example config.

If you click on the Next gadget a new page will appear with a set of different gadgets which are fairly self-explanatory. The Spare gadgets are purely there for cosmetic reasons and will perform no action when clicked.

By holding down the right mouse button at the top of the CliVa display you will be presented with a Project menu. You can flip between pages by selecting Previous Page and Next Page and shrink the window out of sight by clicking on Iconify.

But the most powerful option in the Project menu is Modify. By selecting this and then clicking on a gadget you can edit the command that was attached to it in the config file. As an example, select Modify and then click on the View CliVa Instructions gadget. An edit requester will appear with the actual command this gadget uses – c:mmpp sys:cliva/cliva.doc.

What this command effectively does is call MMPP (a text viewer) from the C directory and display the CliVa.Doc. Don't worry how or why it works as we have provided extensive explanation of the most widely used commands in CliVa. To turn the Modify function off all you need to do is select it again from the Project menu.

In order to gain experience at creating CliVa config files it's best you take a look at the Example.config. Load up the Ed text editor from your Workbench disk and from Ed load up the Example.config which can be found in the CliVa drawer on your *Amiga Computing* CoverDisk.

Now all you need to do is study the print out of the config file on these disk pages and locate the appropriate explanation in the commands summary.

Apparently, CliVa does work on WB1.3 but needs Utility.library, which we could not locate. If in future we come across this library we will include it on the CoverDisk.

To load up your CliVa config files from Shell type in: cliva {pathname}/{CliVa config name}. And turn the page for a commands summary.

Copying CliVa

If you plan to copy CliVa to a hard drive or floppy disk you will need to make sure that you copy the files across that CliVa uses. These are:

```
LIBS:PowerPacker.library
LIBS:req.library
LIBS:diskfont.library
```

Any files in the CliVa drawer should also be copied.

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CliVa commands summary

a : -SET_VAR {name} {value}
This command allows you to create variables which can be used later in your config file. In our example the variables have been assigned to colours which are used to define the colour of the CliVa interface. By allocating variables names, commands are easier to read and manipulate.

b : -POS_WINDOW {x position} {y position}
This allows you to set the position of the top left corner of the CliVa interface. With this command you can effectively open CliVa anywhere on the screen.

c : -DEF_ICON {x position} {y position} {width}
Like the -POS_WINDOW command, -DEF_ICON allows you to specify the top-left corner of the CliVa window (should be the same values as -POS_WINDOW) and the width. The height is controlled by the amount of gadgets and their dimensions.

d : – COLOR_WINDOW {letter colour} {background colour}
Allows you to specify the background colour and letter colour of the window border and menus.

e : -COLOR_BACKGROUND {colour}
Defines the colour of the CliVa interface background.

f : -FONT {font name} {font height}
Defines the font and font size to be used for gadgets.

g : -FONT_STYLE {style}
Lets you alter the font style on gadgets. The style are:
Plain – 0 • Underline – 1 • Bold – 2 • Italics – 4 • Extended – 8
You can use multiple style commands by adding the appropriate values together.

h : -NB_GADGETS {horizontal amount} {vertical amount}
Informs CliVa of the amount of gadgets you will be using. If the dimensions or amount of gadgets exceeds the CliVa window screen dimensions an error message will be displayed.

i : -WINDOW_TITLE {"Title"}
With this command you can add your own title to the window. Make sure you use quotes.

j : -SIZE_GADGET {width} {height}
One of the more important commands which allows you to define the size of your gadgets.

k : -PIXEL_BETWEEN_GADGET
{x distance} {y distance} Defines the space, in pixels between the gadgets.

l : -PIXEL_FROM_BORDER {left} {right} {top} {bottom}
Defines the space, in pixels between the gadgets and the border of the CliVa interface.

m : -COLOR_BORDER_GADGET {top colour} {bottom colour}
This defines the colours used for the gadget borders.

n : -COLOR_GADGET_DEF {letter colour} {background colour}
Allows you to define the colours of the gadgets.

o : -GADGET_ICONIFIED {title}
Displays the title in the CliVa window when it has been iconified. Do not use quotes.

p : =D {"gadget title"} {letter colour} {background colour} {font style} {command} *The above two lines allow you to define a gadget and specify its colour and font style. The command is executed when the gadget is clicked.*

q : \np
Allows you to attach a next page command to a gadget.

r : \pp
Allows you to attach a previous page command to a gadget.

s : \Q
Quits CliVa. You could attach this to a gadget as a command.

```
File - "Example.config"
a -SET_VAR GREY 0
  -SET_VAR BLACK 1
  -SET_VAR WHITE 2
  -SET_VAR BLUE 3
  -SET_VAR F_BOLD 2

  -POS_WINDOW 0 11 b
c -DEF_ICON 0 11 100
  -COLOR_WINDOW WHITE BLUE d
e -COLOR_BACKGROUND GREY
  -FONT Helvetica.font 11 f
g -FONT_STYLE 4
  -NB_GADGETS 3 2 h
i -WINDOW_TITLE "Amiga Computing CliVa Guide 1993"
  -SIZE_GADGET 208 13 j
k -PIXEL_BETWEEN_GADGET 0 0
  -PIXEL_FROM_BORDER 8 8 2 4 l
m -COLOR_BORDER_GADGET WHITE BLACK
  -COLOR_GADGET_DEF WHITE BLUE n
o -GADGET_ICONIFIED Hello

=S
\vs[200]

p =D "View CliVa Instructions"
mmpp sys:acdiskutilstogo/cliva/cliva_eng.doc

=D "View This Example Config"
mmpp sys:acdiskutilstogo/cliva/example.config

=D "Next Page>"
q \np

=D "Spare Button" WHITE BLUE 2
=D "Spare Button" WHITE BLUE 2
=D "Spare Button" WHITE BLUE 2
=P

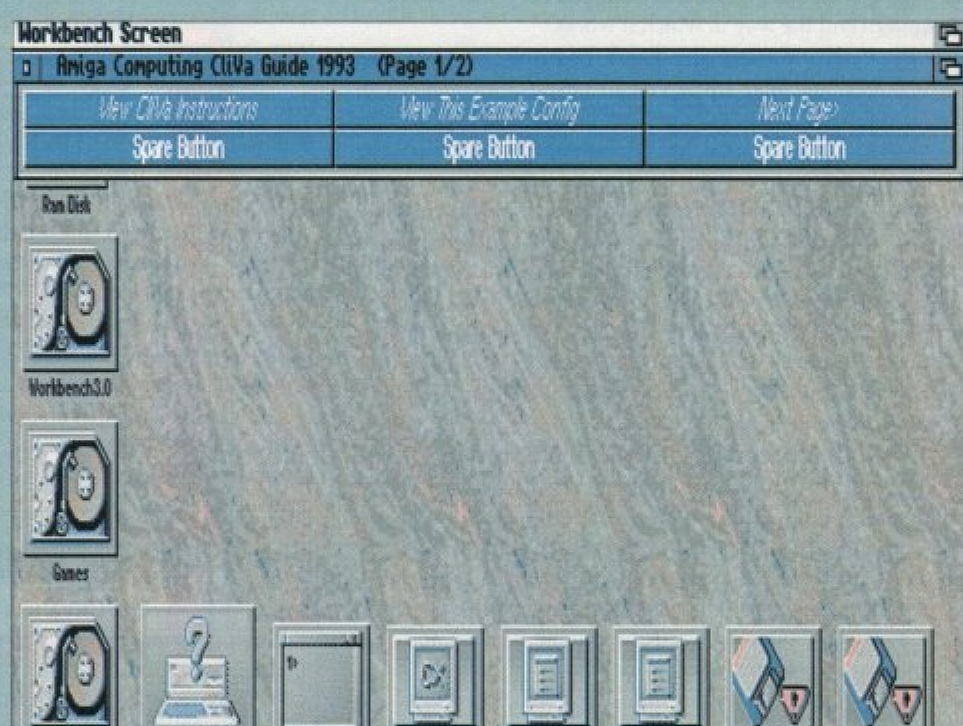
=D "Run The MMPP Text Viewer" WHITE BLACK
mmpp

=D "Previous Page<" WHITE BLACK
r \pp

=D "Quit" WHITE BLACK
s \Q

=D "Spare Button" WHITE BLUE 2
=D "Spare Button" WHITE BLUE 2
=D "Spare Button" WHITE BLUE 2
=P

Example.config          0          > 57          of
```



Sack that Shell once and for all. With CliVa you can access all your favourite programs without messing around in DOS

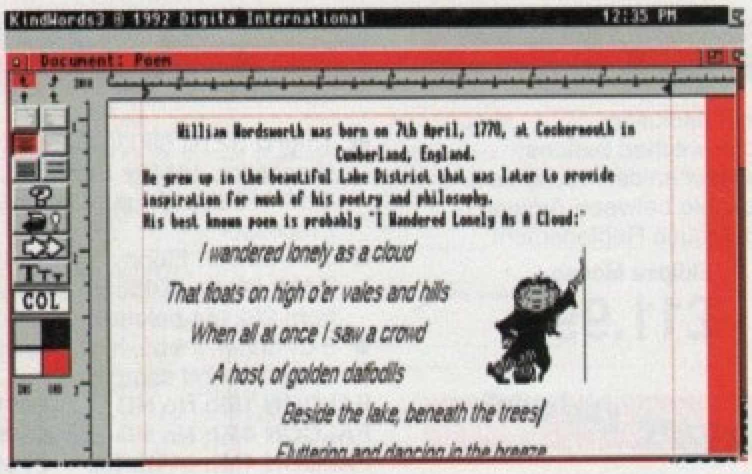
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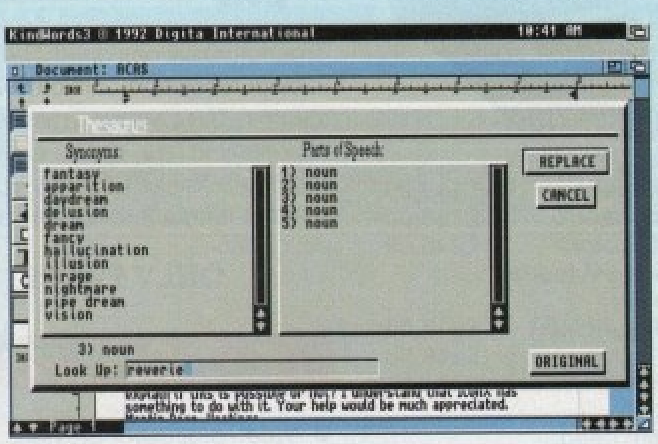


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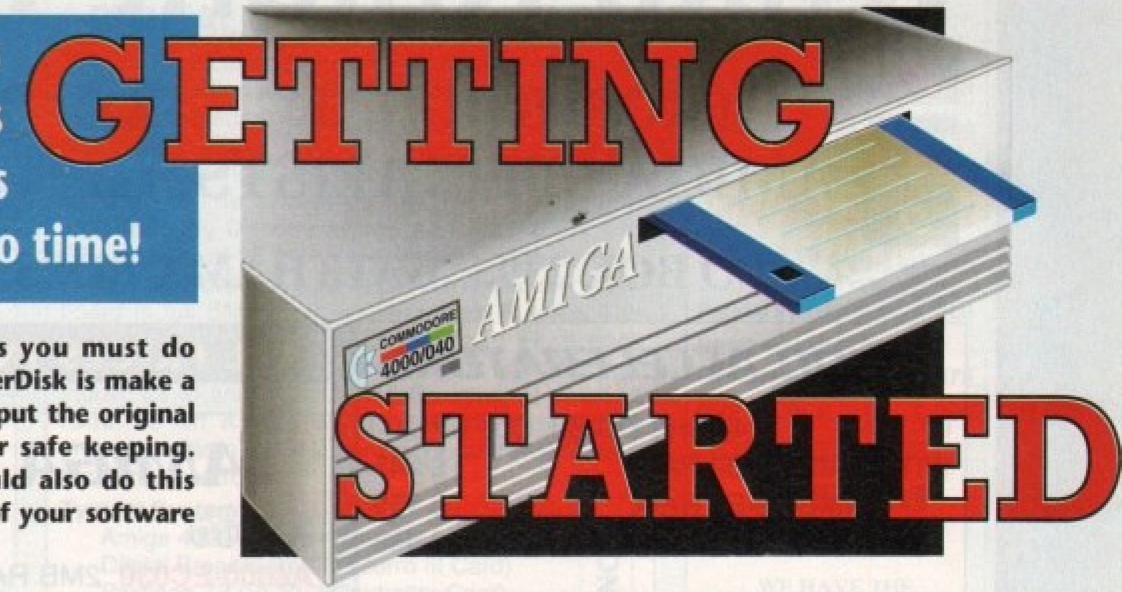
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The *Amiga Computing* CoverDisk is designed to be as simple to use as possible. Follow these instructions and you'll be up and running in no time!



New readers may have difficulties using our CoverDisk, so we have included this page to help you out.

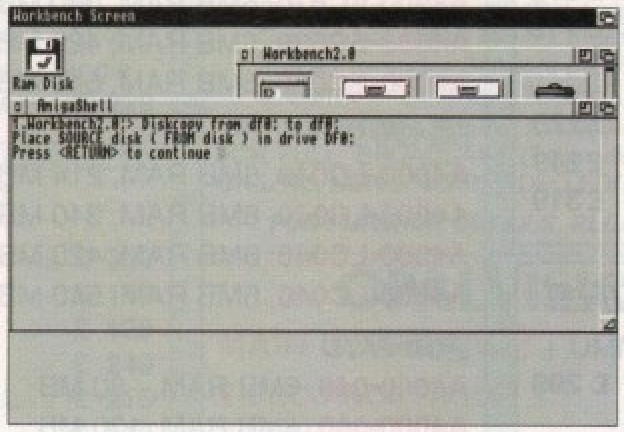
Below we explain how to copy files from one disk to another, how to copy the entire CoverDisk and how to de-archive programs. One of the first things you must do when get your CoverDisk is make a backup copy, then put the original CoverDisk away for safe keeping. As a rule you should also do this with the majority of your software collection.

How to make a backup

To copy the entire CoverDisk, load up your Workbench disk, then either click once on the CoverDisk icon and select Duplicate, or select Copy from the Workbench menu, or open CLI/Shell and type:

```
DISKCOPY FROM DF0: TO DF0:
```

When prompted, put your CoverDisk (the source disk) in df0: and be ready to replace it with your blank disk (the destination disk). Follow the Amiga's on-screen prompts until the disk copy is completed. Now put the original away in a safe place and use your backup.



Copying individual files

You might at some point want to copy a single program from a CoverDisk to your compilation, Workbench disk or even your hard drive.

To do this you'll need the COPY command. As most CoverDisk programs are stashed away in their own directories, the quickest way to copy a program is to copy the whole directory at once. Use the command:

```
COPY {directory} TO {newdisk} ALL
```

where {directory} is the full pathname of the directory you wish to copy, and {newdisk} is the name of the disk and directory into which it will be copied.

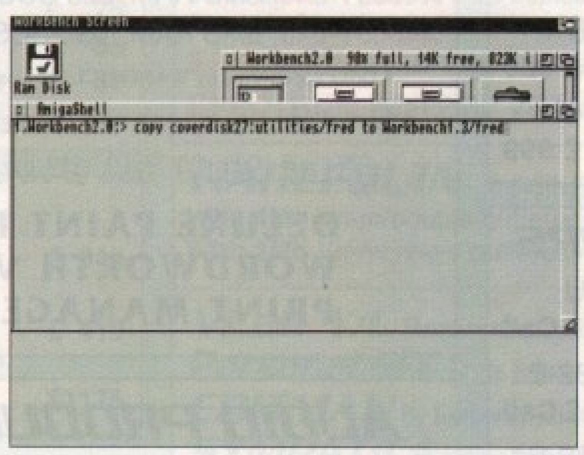
For example, if you wanted to copy a utility called FRED from CoverDisk 27's Utilities drawer to a directory called FRED on your Workbench disk, you'd type:

```
COPY COVERDISK27:UTILITIES/FRED TO WORKBENCH1.3/FRED ALL
```

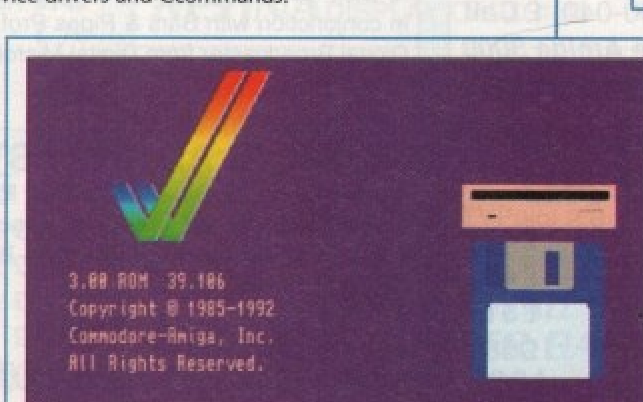
Alternatively, you can click once on the FRED directory icon and drag it across to the new disk's window. This has the advantage of creating a new directory for you and copying the icon as well.

Once you have moved a particular program to where you require it you could experience some problems running the program. This is sometimes caused by the program not being able to find files which it needs to run.

A good example is the text files on the CoverDisk. These have been crunched using PowerPacker, so when you try to copy them to another disk and then try to read them you can't unless you have also copied the Powerpacker library into your LIBS drawer.



So if you have copied a program from the CoverDisk to your Work disk or hard drive make sure you also copy any other files the program requires, ie fonts, libraries, device drivers and Ccommands.



De-archiving

Occasionally we have so many programs to fit onto the CoverDisk that we have to archive them. Archiving is where we take the entire contents of a disk and compress them into one file which is much smaller, giving us space to fit more programs onto the disk.

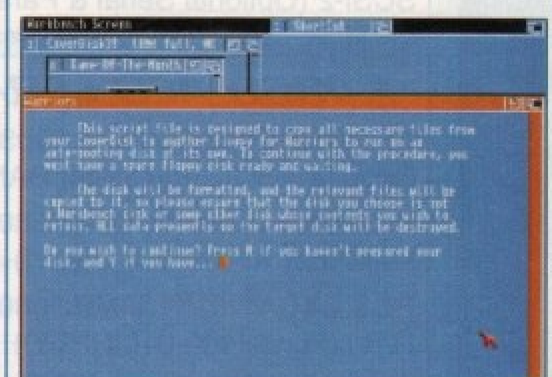
Dearchiving programs which are on the CoverDisk is a very simple task. If a program has been archived then you will need a blank disk to dearchive it onto.

Say we have archived a program called FRED. You simply double click on FRED's icon, and will be asked if you have a blank disk ready to dearchive to. Type "y" or "n" accordingly.

Your computer will then copy the archived file into its memory and ask you to insert your blank disk. It will proceed to format the disk, and will then de-crunch the archived file onto your blank disk.

Once this has been done you can simply reboot your machine with the disk which contains the dearchived program on it and then use the program as instructed in the CoverDisk pages.

Note that if you have a Workbench 2 or upward machine you must boot with the CoverDisk write-enabled to perform the dearchiving process.



Workbench 3

If you have a Workbench 3 machine, don't worry – most if not all of the programs on the CoverDisk will work on your machines.

If the program is specifically designed to work with Workbench 3 then you may have to copy the program to your hard drive or Workbench disk using the process described earlier on this page.

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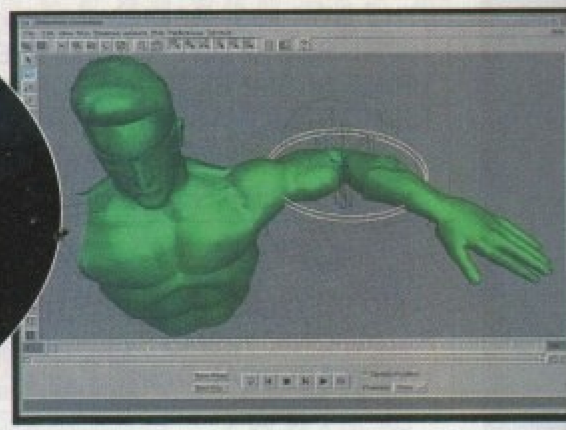
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Some of the advanced imagery generated by the leading 3D software packages

Games without frontiers

The AC team look at the cutting edge of games development and ask: "Where do we go from here?"

If you cast a brief glance over the development of the computer game in the past five years, it is obvious that we are reaching a watershed which could see the end of video games as we know them.

Though the chart toppers of today are still recognisably descendants of the original Space Invaders game, the next decade of development is likely to push back the boundaries of what is possible until 21st Century games resemble science-fiction more than reality.

The advent of CD-ROM, new super-fast processors, and early experiments with virtual reality promise a leap in technology which is more revolutionary than evolutionary, and the benefits could be felt in less than five years.

Pick up almost any computer game you care to mention and it will follow certain basic principles. The action takes place in an obviously synthetic 2D world, regardless of whether or not the game simulates 3D (the distinction is an important one). All interaction is via the relatively crude mouse or joystick device, and all situations which might crop up in the game have been programmed in advance and can't easily be changed.

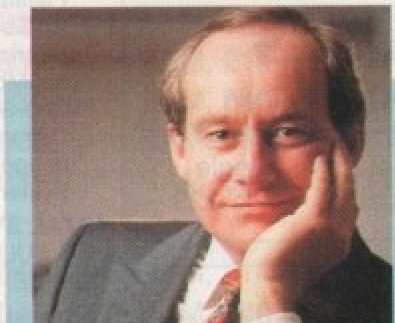
Only sports and flight simulators cater for human responses which change the way the game actually plays, and even then only in a limited sense.

SKETCHED

Ten years from now, however, a "game" might be nothing more than a loosely sketched out world in which the programmer designs the parameters for the sort of obstacles one might meet, and the player, by his or her actions, determines which obstacles or challenges will crop up.

Such open-ended game design, a "virtual world" with or without the 3D headsets, has been the goal of games programmers for years, as programs such as Elite and Ultima Underworld show.

Technology has never afforded the games industry a machine powerful enough yet cheap enough to carry this sort of entertainment to the public, but the moment for such a development isn't far off.



We are convinced that digital media will change the way the world uses computers...

Nigel Seed, managing director of Silicon Graphics Ltd

Progress in the fields of Risc chip technology, artificial intelligence and alternative input devices mean that in ten years we could all be wearing body suits while standing in the middle of the living room with a headset on, the latter doing its level best to convince us we're deep in the monster's labyrinth.

The damage this could cause to ornaments and domestic pets as Dad – blinded to the real world – takes out another imaginary orc with his broadsword doesn't bear thinking about, but fun levels should rocket.

For the moment we are stuck with a halfway house, CD-ROM games which include oodles of high-tech 3D rendered imagery (Labyrinth and Seventh Guest spring to mind) but which are held back by their linear natures.

Current home micros are nowhere near powerful enough to create these 3D worlds in real time, so the player is forced to

Gremlin Graphics

At Gremlin Graphics the subject of gaming in the 21st Century isn't a topic taken lightly. Such is the commitment of managing director, Ian Stewart, that he has invested in two Silicon Graphics Indigo machines.

To explore the parameters and to discover exactly what can be done within the structure of a game on the Indigos, Gremlin have also taken on the skills of two full-time 3D modellers.

Syd Franklin and David Lewis, working with SGI machines, spend the majority of their time rendering images and animations for future projects.

When we spoke to David he was working on some sprites for a car game (which is being kept under wraps), and Syd had just finished converting an intro sequence for Zool on the CD32.

As Syd explained: "The Zool intro was something I'd done some time ago on the Indigo. When the CD32 came along we had a storage system quick enough to just about handle it, though it was still necessary to shrink the sprites."





The Zool intro was one of the first to be created on SGI machines

Both of the 3D modellers at Gremlin have an obvious leaning towards creating games that feature the type of graphical reality that the Silicon Graphics machines are capable of.

However, Gremlin remain adamant about the most important aspect of a successful title, and David illustrates the point:

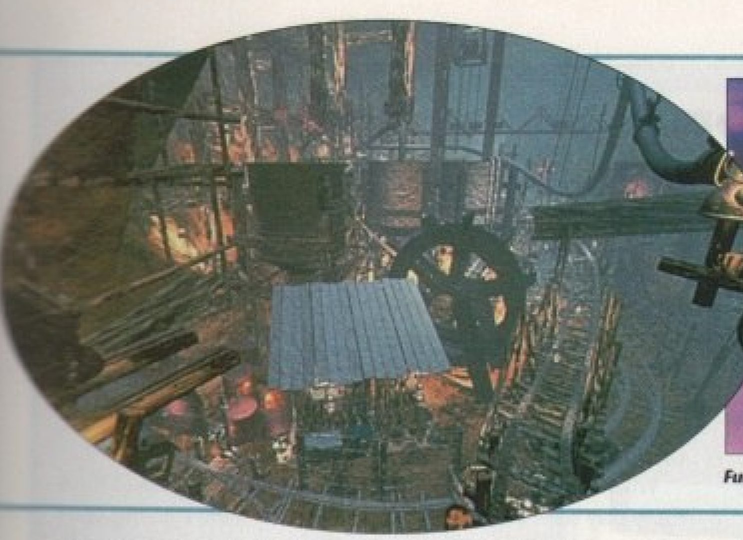
"At the moment it seems that gameplay is giving way to fancy graphics. In the near future people will have got used to this standard of display and insist on a fusion of the two."

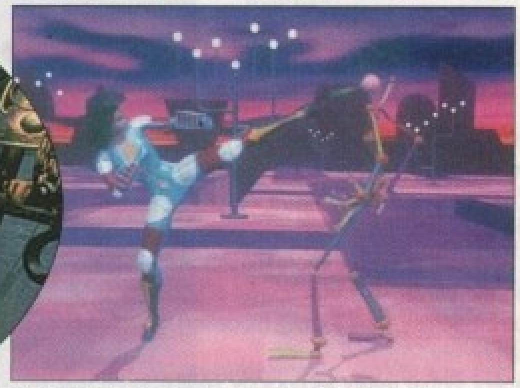
TECHNOLOGY

David sees CDs as a major medium for storing information, but envisages that areas of technology will split.

"Games on a screen should, graphics aside, stay the same, but new interactive entertainment like Peter Gabriel's Xplora 1 CD will break off and create a whole new market."

At the moment many of the images that the Silicon





Fully rendered beat-em-ups are just the beginning

The 3D trio

Wavefront, Alias, and Softimage have between them worked with Industrial Light and Magic, LucasFilm, Walt Disney, just about every major TV station in the Western world, and a host of film, TV, and video production companies besides. Now they're moving into games, and we should all benefit.

The software developed by the three companies is one full revision ahead of even Lightwave and Real 3D v2, the Amiga's best 3D packages (though the latter don't cost up to £40,000), and when used on machines capable of almost real-time rendering, the results can knock your socks off.

explore a landscape whose limits are strictly set by the designer.

When the latest hot consoles hit Europe this year, we should have arrived at the threshold of the virtual revolution, but even 3DO, Jaguar, and Sega's Saturn will struggle to produce anything other than much more colourful and tuneful versions of the same old games. These Risc machines are a definite step forward, but not yet a leap.

The leap should come with the release of two machines currently in development. One, Sony's PS-X, is a 32-bit machine but with a team of Risc chips running at between 30 and 80 mips (millions of instructions per second – a 68040 will only reach 18 mips) and is still deep in the development stage.





Microcosm intro courtesy of Psygnosis and SGI's Indigo

The second, Nintendo's Project Reality console, is due for an appearance in arcades this year, but retail release is still not slated until late in 1995.

Both machines have been designed from the ground up to pack enough power for real-time 3D rendering, and many an inflated claim is being made on both sides as the hype war grinds into gear.

PROTOTYPE

Neither company have been able to demonstrate games running on prototype machines as yet, but the pedigrees which both Project Reality and PS-X can call upon are impressive.

Nintendo's Project Reality is a joint project in conjunction with Silicon Graphics (SGI), whose lead in the world of super-powerful 3D graphics machines is undisputed.

Using a hybrid of the R4000 Risc chip found in the SGI machines which rendered Terminator 2 special effects, Project Reality promises 100 mips (five times as fast as a 68040) and 100 MFlops to generate complex shaded 3D scenes in real time.

In keeping with these hyperbolic assurances, Sony claim their PS-X console will be capable of 500,000 Gouraud-shaded polygons per second. At 20,000 per frame in PAL mode this is enough to generate and animate a huge 3D object such as a tyrannosaurus or a complete landscape in full smooth 25 frames per second (the same speed as a video or TV program). The chips at the heart of the PS-X are very similar to those used in Project Reality. A central processor is aided by a series of ASICs (application specific integrated circuits) handling sprites, polygon movement, sound, and so on in much the same way as the Amiga's custom chips (which we'll have to call ASICs now, I suppose) have for nine years.

In combination with hugely fast data buses, the multi-chip line up should leave jaws dragging the floorboards wherever it is shown to the public.

So where will this leave the video game (or "gamevideo" as some are now calling it)? Programmers have moved from machine to machine for years in search of the most powerful 3D processing power, so when faced with systems which can create almost photo-realistic games in real time they'll jump on the bandwagon till its axles collapse.

No mainstream computer such as the Amiga or PC will be able to compete with dedicated 64-bit consoles unless they use huge Risc-based central processors, but even then the general purpose machines will lack dedicated ASICs. If Sony and Nintendo manage ➤



Graphics machines are creating will probably never see the light of day, but both Syd and David are optimistic about the future.

"There's a lot to be excited about in the near future, companies have some hot ideas in the pipeline. For example, Project Reality which will combine Silicon Graphics hardware inside a Nintendo console."

Syd, while not in disagreement, feels that virtual reality is what will really stoke the fire of imagination:

"Virtual reality is at a very simple polygon level at the moment, but once you can exist in the kind of world a Silicon Graphics machine can generate it'll be amazing."

In the meantime, the Gremlin 3D modellers are content to be working on intro sequences for forthcoming titles like Utopia 2, and both freely admit: "We can't really complain, we have two state-of-the-art machines, the design world's our oyster, and we get paid for it."

to bring their machines to the public for the dubiously low planned price of $250, the traditional games market will see a squeeze to make Sonic the Hedgehog look like a gentle hug.

Leading edge games such as Labyrinth on CD32 and Seventh Guest on the PC are forced to compromise playability to achieve their superb 3D graphics, but PS-X and Project Reality threaten to remove the need for fudges.

All movement in Seventh Guest, for example, is limited to whether or not the programmers included a pre-rendered animation for that movement, and if not you can forget it. The result is a linear game which becomes more and more tedious as your admiration for the graphics wears off.

REALISTIC

A bit like those old text adventures, in fact. Remember them? How many times did you type "get sword" only to be told "I don't know that word"? Well, Seventh Guest is the modern equivalent.

By giving the new consoles a 3D map of the game world and enough bitmap textures to create a realistic look, the programmers can let players just render their own adventures as they go along. Playability and presentation will at last begin to work together instead of competing for room on the disk.

To achieve this explosion in 3D graphics, software companies who up until now have relied heavily on DPaint and other 2D art packages have been forced to call in the professionals, and this has increasingly meant the use of SGI machines and software from one of Silicon Graphics's partner companies.

Wavefront, Alias, and Softimage have all developed new versions of packages already much used by the film and TV industries, tailoring them to the specific needs of the games programmer.

For example, rather than create a broadcast-quality image, the software enables the programmer to decide how many polygons a scene can contain, given the power of the machine it will eventually run on, and produce graphics which can be guaranteed to animate at the correct frame rate.

Huge 3D sequences, such as those used in Psygnosis's Microcosm, can also be generated with an exact "travelling matte" of the landscape, which can be used by programmers as a collision detector. In this way, the real time elements of the game (sprites, explosions, and so on) can interact seamlessly with the pre-rendered backdrop, giving the player a small step forward in 3D gaming.

SGI workstations, pumping out hundreds of mips of pure processing power, can produce graphics many times faster than any comparable desktop machine, but the speed advantage is of most use to artists during the design stage. One company working hard to bring as much realism as possible to tomorrow's games is Alias, whose suite of software tools is being used by eight U.K games houses on a variety of SGI workstations. Chief among the new tools is the MotionSampler, a body movement sensor system designed to track an actor's movements and translate them to the characters in a game.

Using this system, games houses can create human characters both in the games themselves and in the intros, which move in



This sort of quality should soon be a standard for intros and game graphics



Virtual or not, you wouldn't want to meet him on a dark night

Electronic Arts

Looking into the future, EA producer Kevin Buckner believes many of the new technologies will play a huge role. Technologies such as multi-channel 3D sound will provide a good area for development. Games have progressed visually, presenting stunning 3D graphics.

Electronic Arts see a similar improvement in aural technologies, providing the player with true spatial sound with reflection and absorption properties, thus exactly modelling the acoustics of any given environment.

At the moment virtual reality technology seems to be split 80 per cent hardware to 20 per cent software and Electronic Arts see plenty of scope for improvement in the software department.

The multi-player aspect of a game can transform something from being good to mind-blowing and Kevin Buckner realises that the main problem with most attempts is that the single-player game is designed first and only then is the multi-player support added.

For the multi-player aspect of a game to truly succeed it needs to be fully designed and must receive the same amount of attention as the single-player version.

Electronic Arts see the future of voice recognition technologies as having great potential for them. They see the keyboard as becoming less involved and the way forward being to slap a microphone into the machine, add voice recognition to the hardware spec and tie this in with a multi-player feature

Imagine the sort of game where you are stalking corridors and can hear your partner shouting for help in the distance. As you get closer, his screams get louder – did that scream come from the left or right?

Electronic Arts intend to make full use of new technologies, and promise progress in visual technologies such as the VR helmet, larger, flatter screens, holograms and home theatre, and in tactile technologies, for instance, VR body suits and artificial motion.

Headway will also be made in aural technology, in particular, voice recognition and acoustic environment modelling.

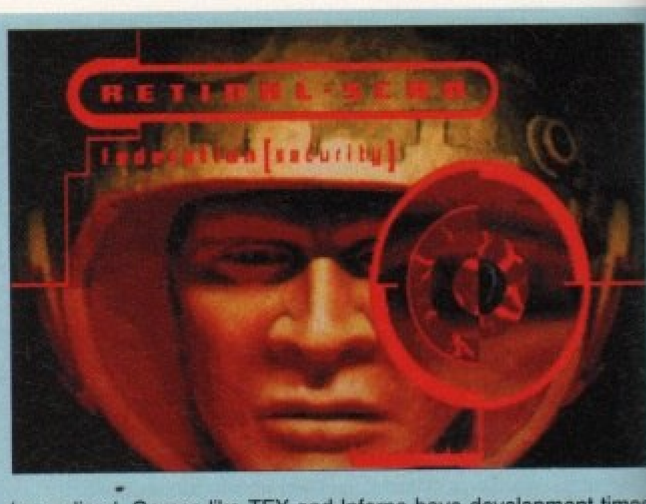
When asked whether increased development costs would force EA to play safe, they state that it is crucial for them that they don't adopt a defensive or reactive mentality and that a cutting edge industry needs cutting edge thinkers and do-ers.

Bearing this in mind they intend to be more careful with their selection process, ensuring that they pick winners. This will mean having to be far more willing to kill an idea when it looks like going astray rather than trying to make a gem out of a dull stone.

As to whether the future will see gameplay sacrificed at the expense of graphics and sound, Electronic Arts believe this is crucial to keep effects and gameplay in balance, and that one without the other results in a poor product.

With more and more technologies coming on stream and more and more expertise coming into the industry Electronic Arts see the future as being a bright one, and that we are set for a fun end to the century.

Ocean Software

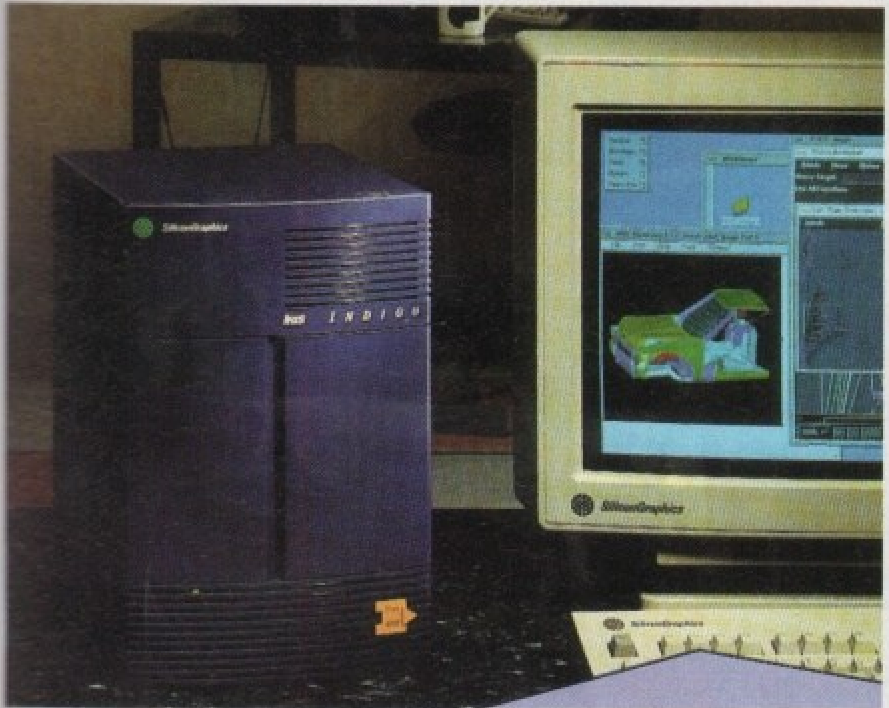


At present, Stephen Hey of the Manchester-based software company can't see even with massive improvements in the hardware that anything particularly new will happen because there are only a finite number of game genres.

Ocean believe the way forward is via multi-player communication networks. Through the use of satellite and land-based phone lines, players will be able to hook up and interact with "real" people thus creating a far more interesting environment.

On the subject of new platforms for software, interest has been firmly focused on Trip Hawkins's 3DO and Atari's Jaguar. Like all new products, Ocean are waiting to see the public reaction to the latest consoles before committing themselves 100 per cent.

While there may be some bitter CD32 owners out there who aren't happy with the straight port overs of software from the A500, Ocean explain that when a machine is first launched upon the market, its abilities are largely unknown. It isn't until developers get to know a machine's architecture and quirks that its full potential can be realised. Games like TFX and Inferno have development times of around two years and it's unlikely that the machines present at the beginning of the process will exist by the time the release date comes round. For this reason, the first batch of software for a new



Indigo: the machine behind the virtual art gallery

exactly the same way as real people – a seemingly simple consideration which lends the finished product an air of believability not possible using traditional animation techniques.

Laser scanners are also being used by software houses to create huge computer models from real world objects. To create a 3D Rolls Royce exact in every detail and proportion, simply stick it in the scanner and let the laser build a point-by-point map of it which the Alias software then interprets.

Scanners sizes vary from shoebox to six feet high, so complete human figures can be scanned then made to move with the motion sampler, resulting in breathtaking realism.

HUMAN

Combine this with a digitised 3D facial scan, multi-player environments and a VR headset, and you can see that the 3D gaming world is fast becoming an entity all of its own.

General trends of thought in the games industry today point towards the interactive multi-player game as the way forward, a game in which the gameplay is supplied by the human players and the stunning graphics by their powerful 3D computers. In other words, the wheel will turn full circle.

In the beginning, the computer game revolution was castigated as an introverted solo pursuit which robbed children of the play experience and of social intercourse. Computers provided the game and the children simply took part.

By the turn of the century, using power gloves, headsets, and perhaps even body suits, we humans will be providing the game, and it will be the computer which is the passive partner.

Virtual reality, as discussed more than once in recent issues of *AC*, may be an exciting new technology, particularly in the games scene, but it also brings with it certain medical and social worries.

The link between our senses and our state of mind is acutely sensitive, and to disturb it for long periods of time might cause major problems.

Evidence for the damage you can do by messing too much in this department is apparent through the effects of sensory deprivation experiments, where trauma and serious psycho-somatic side effects are the result if nature's only bridge between the human mind and its environment is broken.

Games which contain graphics and sound so realistic as to be indistinguishable from the real world pose questions of their own. Man has never been able to completely fool the brain into thinking its world has changed radically, the technology never having been available. The day is in sight, however, when that could change, and the prospect of stepping freely between one world and another, though exciting, is also a little worrying.

It is difficult to see how the Amiga's part in the future of games will develop. As one of the most important players in the development of the computer game, the Amiga has already played a vital part, but if it is to continue at the leading edge it must become more powerful.

Later this year, the true 24-bit AAA chip set should be launched as the basis of a new Amiga, possibly powered by Motorola's 64-bit Risc PowerPC chip. The combination will be a powerful one and there is no reason why a new Commodore console could not make use of this vast increase in capability.

Running at 66MHz with a big brother planned to run at 120MHz, the PowerPC chip will be as cheap, if not cheaper, than the current 680x0, but many times faster, and is already due to appear in both the A5000 and a new range of Macintosh machines. There is no reason apart from lack of marketing muscle and development funds, then, that Commodore couldn't use the PowerPC/AAA combination as the basis for a console to match Sony, Atari, and the rest.

Virtual reality games running on a new super-Amiga? Now there's a thought, eh?

AC



Another Wavefront precursor to the fully virtual game

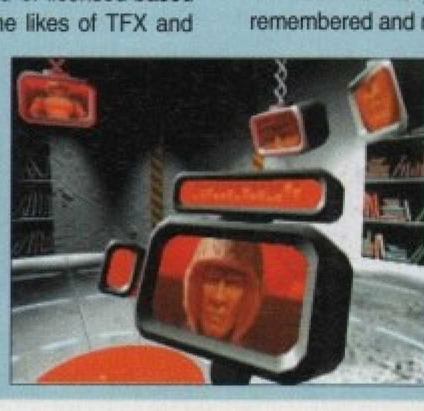
machine are merely conversions of existing titles. As programmers explore the technology further, increasing steps are made to use it to the full potential. In the eyes of Ocean, it's not so much "playing safe" but more about becoming acquainted with the technology before becoming adventurous.

While the company hasn't exactly got the best track record for playable and original games, with their myriad of licensed-based platformers and other formula-driven work, the likes of TFX and Inferno are rapidly expanding their gaming portfolio.

Stephen Hey believes many new CD titles have concentrated solely on the presentation aspects and that playability seems to have been added afterwards.

To beckon in the next generation requires a rebalancing of this problem so that the traditional games that we know and love today will become the games of yesterday that can be nostalgically remembered and not yearned for.







Contacts

For further information on SGI machines and the software available for them, phone:

Alias
Andrew Howes, 0442 251211

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Steve Webb, 0734 306222

Softimage
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PRO 2000 15" COLOUR SUPER-RES MONITOR/TV

The best of both Worlds - A Quality Computer Display and fully featured FST High Definition TV in one! Infra red, FastText Teletext, Loop Aerial, Headphone Socket complete with leads to your Amiga! £239.95

Commodore Displays

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CBM 1942 MULTISYNC 14" COLOUR STEREO Inc. Leads, Dust Cover etc. (for A1200's, 3000's & 4000's) .28 Dot Pitch — NEW LOW... £349.95

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Amiga Printers

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120D+ Mono	£119.95	Swift 200 Mono	£189.95
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		Swift 240 Colour	£234.95

CITIZEN 24Pin EASY TO USE PRINTER...
"A Printer for Everyone that can be Used by Anyone" the all new...

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Compact, easy to use new Citizen. Ideal for the first time user but with the capabilities to grow as your needs increase. Superb 24Pin clarity in mono (or colour with an optional kit) on standard cut sheet paper (50sht feeder supplied as standard), sprocketed paper, overhead slides, envelopes etc. and very qui

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LS-5TT PostScript	£949.95

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BJ200 Mono, 250cps, Inc. Auto-Sheet Feeder	£279.95
BJ230 Mono, 360dpi, 248cps, A4/A3, inc ASF	£369.95
BJC600 S, 360dpi Colour Bubble Jet, uses Paper, OHP, envelopes. 4 colour CMYK system, 240/170cps - text mode, 8 std fonts, 65K Buffer	£554.95

hp

310 Mono Deskjet	£229.95
310 Colour Deskjet	£264.95
510 Mono Deskjet	£264.95
500 Colour Deskjet	£339.95
550 Colour Deskjet	£524.95

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Apple™ equipment has always had a reputation for its quality and reliability...but, at a price! NOW you can use Genuine Apple™ Printers with your Amiga at far MORE COMPETITIVE prices than you'd imagined was ever possible...

Apple™ Personal LaserWriter™ NTR
4ppm Canon engined laser with superfast RISC Processor & 3Mb RAM (upgradable to 4Mb). True PostScript™ Level 2. HP LaserJetII & PCL 4+ emulations. FULLY Amiga & PC compatible. Parallel, Serial RS232 & LocalTalk interfaces built-in. No other laser of this quality costs so little... **£739.95**

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Canon Accessories & Consumables

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BJ200/230§	£15.95	BJ800 - Cyan#	£21.95
BJ600 - Black	£6.95	BJ800 - Magenta#	£21.95
BJ600 - Cyan	£8.95	BJ800 - Yellow#	£21.95
BJ600 - Magenta	£8.95		
BJ600 - Yellow	£8.95		

(*Also for Apple StyleWriter I)
(#Also Apple Colour)
(§Also for Apple StyleWriter II)

SHEET FEEDERS:

BJ10sx in White or Black	£54.95

CITIZEN Accessories & Consumables

RIBBONS:

	MONO	COLOUR
120D	£3.95	NONE
90/C	£3.95	£15.95
24/200/240	£4.45	£15.95

AUTO SHEET FEEDERS: All 80 Column Models (Please state) £84.95

ACCESSORIES:

9/24Pin, 80Column Colour Kit (not 124)	£37.95
24Pin, 32K RAM Expansion (not 200/240)	£13.95
24Pin, 32K RAM Expansion for 200/240	£19.95
24Pin, 128K RAM Expansion (not 200/240)	£32.95

star Accessories & Consumables

	MONO	COLOUR
RIBBONS:		
LC10/20/100	£3.95	£5.95
LC200	£5.95	£10.95
LC24/200	£6.25	£12.45
LC24-30 MONO	£8.95	—
INKJET CARTRIDGES:		
SJ48	£15.95	NONE
SJ144	£10.95	£12.95

AUTO SHEET FEEDERS: All 80Column Models... (Please specify model when ordering) £84.95

See Page 2 for extended warranties

hp Accessories & Consumables

	MONO	COLOUR
INKJET CARTRIDGES:		
Deskjet/Deskwriter	£24.95 (DoubleLife)	£27.95
Paintjet	£21.95	£27.95
PAPER/TRANSPARENCY FILM:		
Single Sheet		£18.95
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Transparency Film (50 Sheets)		£49.95
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Amiga Memory and Accelerator Boards

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EXCITING NEW BLIZZARD!!!

Blizzard 1220/4 Turbo Memory Board

NEW!!!

Even more powerful than its predecessor (which was given the coveted Amiga Format Gold Award). JUST LOOK ART THE SPEC..

1. 4Mb AUTO-CONFIGURING 32Bit FAST RAM as standard (with an option of a further 4Mb to a total of 8Mb).
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5. Sockets for Maths Co-Pro (FPU) and Crystal-68881 or 68882 up to 40MHz speed.
6. Retains CBM on-site warranty for computer
7. Easy to fit in computers Expansion Trapdoor
8. Latest SMT (surface mounted technology)
9. Full 12 Months Warranty

ALL FOR THE SORT OF PRICE MANY CHARGE FOR NORMAL MEMORY BOARDS **£199.95**

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4Mb. RAM Expansion (Blizzards own)	£TBA
33MHz. FPU Maths Co-Processor	£79.95

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Blizzard 1230 Turbo Accelerator

From the makers of the acclaimed Blizzard 1200 RAM Board comes a great A1200 Accelerator...

1. 400-500% performance increase on all applications (with additional on board RAM)
2. Optional fast (up to 10Mb/sec) DMA SCSI-II interface for CD ROM etc. (CDTV, ISO-9660 Formats), Removable/ Drives (Syquests Bernoulli etc) as used on Macintosh etc.
3. 40MHz 68EC030 Processor
4. Up to 50MHz 68882 PLCC or PGA FPUnit (Maths Co-Pro)
5. Up to 64Mb of 32-Bit RAM using standard 72 Pin SIMMS
6. Battery backed real time clock
7. Easy trap door installation. Does NOT void warranties
8. No software required, just plug in and go!

BLIZZARD 1230 TURBO (0Mb.)	£244.95
4Mb. RAM Expansion, 32Bit SIMM	£149.95
33MHz. FPU Maths Co-Processor	£79.95
BUY ALL THREE TOGETHER FOR JUST...	£449.95

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Lightning FAST Hard Disk access for all Amiga A4000 owners. The only IDE answer...

1. Fast (up to 10Mb/sec) DMA SCSI-II interface for CD ROM etc. (CDTV, ISO-9660 Formats), Optical/Removable Drives (Syquests etc) as used on Apple Macintosh etc.
2. Expandable up to 64Mb of 32-Bit Fast RAM
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Exceptional Value FASTLANE Z3... £329.95

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SEE PAGE 2 FOR DETAILS
GOLD SERVICE

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All prices are inclusive of VAT at 17.5%. Prices are correct at time of going to press and subject to availability - E&OE.

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ESSENTIAL HARD DRIVE MANUAL FREE WITH ALL OUR INTERNAL HARD DRIVES

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Self Fit	£229.95	£244.95	£309.95

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If you prefer we can install your drive for you and you'll benefit from...

1. Speedy collection of your Amiga
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3. Formatting with Workbench installation
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6. Courier delivery back to you.

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Other Hard Disk Sizes: may be available, please phone us for further details. Please note that although smaller sizes (eg 40 and 60Mb.) are still advertised, they are no longer produced in large quantities or even at all. Long term repair replacement parts will become a problem. We would NOT therefore recommend them

External Amiga Disk Drives

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Independent Power Supply
Installation Software and Manual

ALL Overdrives from Harwoods are pre-formatted, fully tested and ready to go!

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PRICE	PHONE	£329.95	£344.95	£364.95
Capacity	340Mb	420Mb	540Mb	Others
PRICE	£399.95	£484.95	£629.95	£PHONE

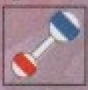
Supra FAX/DATA Modems

SUPRA 144LC FAX MODEM V.32 bis
This modem can transmit and receive both FAXES and DATA at speeds of up to 14400 bps. Amiga cable and Modem to Modem Data COMMS software provided. Optional software required (GP FAX, below) to enable FAX facilities. **£159.95**

SUPRA FAX PLUS MODEM V.23 bis
Transmit and receive FAXES at 9600/4800 bps and DATA at 2400 bps. Amiga cable and Modem to Modem Data COMMS software provided. Optional software required (below) to enable FAX facilities. **£109.95**

GP FAX SOFTWARE Required with the above Supras to enable FAX facilities **£49.95**

Amiga Accessories

Category	Item	Price
Sound & Graphics	Rombo Vidi 12, V2.00	£74.95
	Rombo Vidi 12, Sound & Vision	£94.95
	Rombo Vidi 12, Real Time	£169.95
	Rombo Vidi 24, Real Time	£239.95
	Technosound Turbo Sampler	£29.95
	NEW Technosound Turbo 2	£44.95
Amiga Music Peripherals	Miracle keyboard	£249.95
	Music X full version 1.1	£24.95
	Midi interface 5port c/w cable	£24.95
	ZYFI Stereo Speakers	£39.95
	ZYFI Pro Stereo Speakers	£54.95
	Stereo Master	£29.95
	Deluxe Music 2	£69.95
	Meglosound	£29.95
Amiga Scanners & Genlocks	Power Mono V4.0 Hand Held Scanner	£127.95
	Epson GT6500 Flatbed Scanner	£839.95
	Epson GT8000 FlatbedScanner (inc. Art Dept. Professional)	£1179.95
	Art Dept. Pro - existing scanner owners...	[illegible]
	Rendale 8802 Genlock	£179.95
	Rocgen Genlock	£149.95
Quality Alfa-Data Amiga Mice	HQ Microswitched MEGA MOUSE	£12.50
	HQ Microswitched 400dpi Resolution MEGA MOUSE	£13.95
	HQ Microswitched MEGA MOUSE inc. Mouse Mat/Holder	£19.95
	High Quality microswitched Optical mouse	£28.95
	Alpha Data Mouse Pen	£32.95
	HQ Microswitched Trackball	£29.95
	Auto Mouse/Joystick Switcher	£17.95
Amiga Workstations	RSD Control Centre & Monitor Plinth with shelf:	
	For Amiga A500	£47.95
	For Amiga A600	£39.95
	For Amiga A1200	£47.95
Amiga Joysticks	Zipstick Autofire Joystick	£11.95
	Python 1M	£10.95
	The 'BUG' Microswitched	£14.95
	Konix Speedking Autofire	£12.95
	Konix Speedking Analog	£14.95
	Gravis Game Pad	£19.95
	Full range of Quickjoy and other makes stocked	Phone!
Blank Disks STILL AT LOW PRICES!	10 TDK 3.5" DS DD	£7.95
	50 TDK 3.5" DS DD	£32.95
	10 TDK 3.5" DS HD	£10.95
	50 TDK 3.5" DS HD	£49.95
	Certified Bulk Disks with labels:	
	10 with library case	£6.95
	50 Disks - only...	£24.95
	100 Disks - only...	£39.95
	250 Disks - only...	£94.95
	3.5" Disk Head Cleaner essential for reliable loading	£2.95
Mouse Mechanic	Universal mouse cleaning tool. NO FLUID, Use over and over! 	£4.99 +50p p&p
Amiga RAM Upgrades	A500 1/2Mb. Trapdoor U/G	£32.95
	A500Plus 1Mb. Trapdoor U/G	£39.95
	A600 Trapdoor U/G (A500/600 RAM Exp. inc. Battery Clock)	£47.95
	PCMCIA Cards for A600/1200 (fit in Smart Card Slot):	
	PCMCIA - 2Mb.	£119.95
	PCMCIA - 4Mb.	£174.95

Amiga Book Shop

Title	Price
Amiga 1200 Insider Guide	£14.50
Amiga A600 Insider Guide	£14.50
Mastering Amiga Assembler	£21.95
Mastering Amiga Beginners	£18.50
Mastering Amiga C	£18.50
Mastering Amiga Workbench	£18.50
Mastering Amiga Dos V2 Vol.1	£19.50
Mastering Amiga Dos V2 Vol.2	£19.50
Mastering Amiga Dos V2 Vol.3	£23.50
Mastering Amiga AMOS	£18.50
Mastering Amiga AREXX	£19.50
Mastering Amiga System	£24.95
NEW!! A1200 Next Steps	£14.50
NEW!! A1200 Beginners Pack	£37.95

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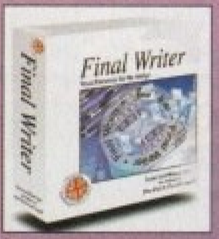
SEE PAGE 2 FOR DETAILS

GOLD SERVICE

Amiga Software

Category	Item	Price
Word Processing and Publishing	Pen Pal V1.5	£34.95
	Final Copy II Release 2-AGA	£69.95
	NEW...Final Writer	£114.95
	The Publisher	£39.95
	Professional Page V4.1	£129.95
	Pagesetter III	£47.95
	Wordworth 2 - AGA	£99.95
	Softfaces 1 to 4 (for FCII)	£39.95
	Softclips 1 to 4	£29.95
	Softwood Proper Grammar 2: (Grammar & Spelling checker, for ALL Amiga Word Processors)	£39.95
Integrated Titles and Databases	Mini Office FEATURING... Word Processor, Spreadsheet, Database and Disk Manager... FULLY INTEGRATED!	£39.95
	Superbase Personal 2	£29.95
	Superbase Personal 4	£114.95
CAD & Drawing	X-CAD 2000	£97.95
	X-CAD 3000	£254.95
	Art Expression	£144.95
	Expert Draw	£49.95
Video Software	Scala 500 Home Titler	£74.95
	Scala Professional	£177.95
	Scala MM202	£289.95
	EditMate	£194.95
	Broadcast Titler 2 - SVGA	£174.95
Miscellaneous Software	GB Route Plus	£36.95
	Turboprint Pro 2.0	£34.95
	Mavis Beacon Teaches Typing 2	£22.95
	TypeSmith	£119.95
	System 3E	£54.95
	Personal Finance Manager	£34.95
	Arena Accounts	£94.95
	Disk Expander	£32.95
Amiga Animation and Graphics Software	Deluxe Paint 4.1	£64.95
	Deluxe Paint 4 (AGA)	£74.95
	NEW... Caligari	£97.95
	3D Construction Kit	£36.95
	Adorage Ad 2	£57.95
	Vista Pro 3	£54.95
	Art Department Prof. V2.3	£149.95
	DCTV Composite Video (24-Bit Graphics System - PAL)	£349.95
	Morph Plus	£149.95
	Real 3D Classic	£74.95
	Real 3D 2	£379.95
	Brilliance	£147.95
	Pixel 3D Pro + Anim Workshop	£149.95
Amiga Development and Utilities Software	Quarterback V6	£59.95
	Quarterback Tools Deluxe (Advanced Disk/File Management)	£99.95
	PC Task - PC Emulator	£37.95
	Cross DOS	£34.95
	Easy Amos	£24.95
	Amos The Creator	£36.95
	Amos Compiler	£21.95
	Amos 3D	£25.95
	Amos Professional	£36.95
	Amos Professional Compiler	£24.95
	Blitz Basic 2	£54.95
	New SAS Lattice C V6.3	£259.95
	Devpac 3	£52.95
	Directory Opus V4	£49.95
Amiga Educational Software	"Micros" up to GCSE Standards	
	micro science - to GCSE	£18.95
	micro maths - to GCSE	£18.95
	micro english - to GCSE	£18.95
	micro french - to GCSE	£18.95
	micro spanish - to GCSE	£18.95
	micro german - to GCSE	£18.95
	compendium six (6 titles)	£27.95

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A great new Word Publisher which incorporates DTP like features with excellent quality results **£114.95**

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Crunch!



All you need to know about hard drives, as they get expanded, compressed, packed and archived by Ben Vost

A well-known maxim in the computer industry is that you can never have too much disk space, RAM or processing power. Normally, all three cost, but you can get more disk space fairly simply, and cheaply, or for free.

In the cheap category we can include utilities like Pegger, PowerPacker Professional or Disk Expander, but there are also many shareware and public domain hard drive compression programs that cost little or nothing.

Before we can discuss the merits of disk compression, we need to understand the varying techniques used by the different programs to give you more space on your disk.

Firstly, there are the archivers. These programs take single files, or directories of files and squeeze them down into one big (but hopefully smaller than when you started) file.

You can't use these compressed files directly – they must be decompressed first. There is a variant on this method for floppy disks only which, instead of compressing the individual files, compresses the whole disk, track by track.

Secondly, there are the compressors. These also compress files (obviously!), but rather than clumping them all together as one file, they compress each file individually. The compression factor is not so great, but the real advantage of this method is that you can carry on using the files as though they were not compressed at all.

As always, there are some that don't fit into either category, so I'll deal with them last. But first, archivers...

We in the Amiga world are very fortunate to have such an enormous amount of PD software available to us. Comparing the amount of PD to owners of Amigas, there are probably more PD programs written per head than for any other machine.

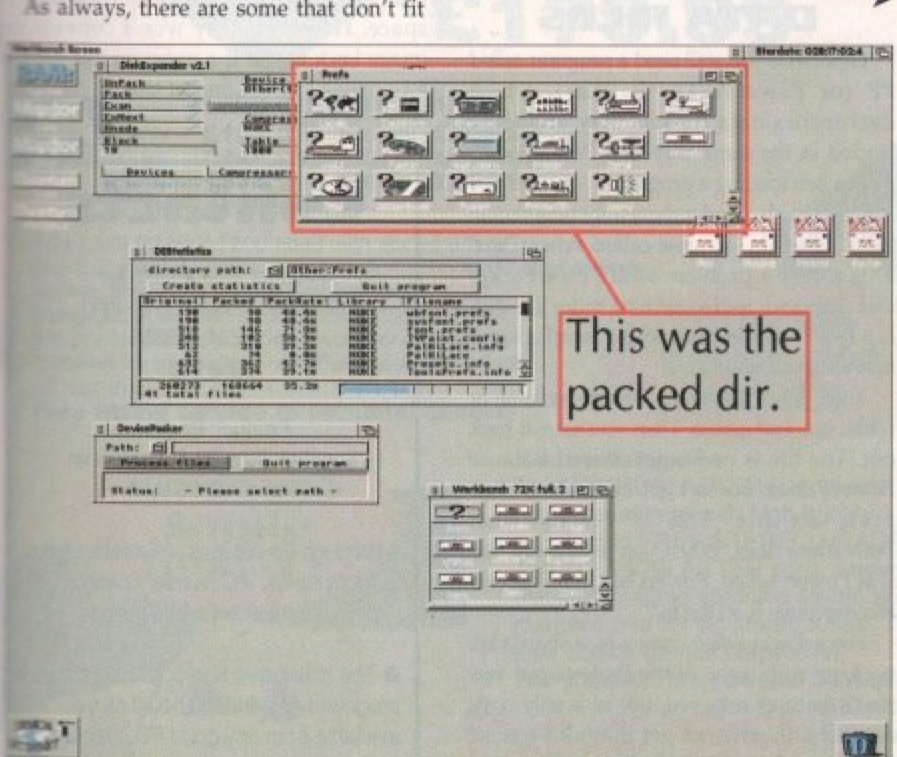
This puts us in the enviable position of being able to find almost any type of program, including archivers, for free (or a minimal shareware fee). First up in our list are the LHArc family of programs.

LHArc is probably the single most popular format for archiving files on the Amiga. It appears in several forms including LHArc, LZ and Lha, all written by different authors. This, like nearly all of the archiving programs, is designed to be used from the Shell, which rather limits its friendliness, although you can get Workbench frontends for LHArc which cut out most of the work.

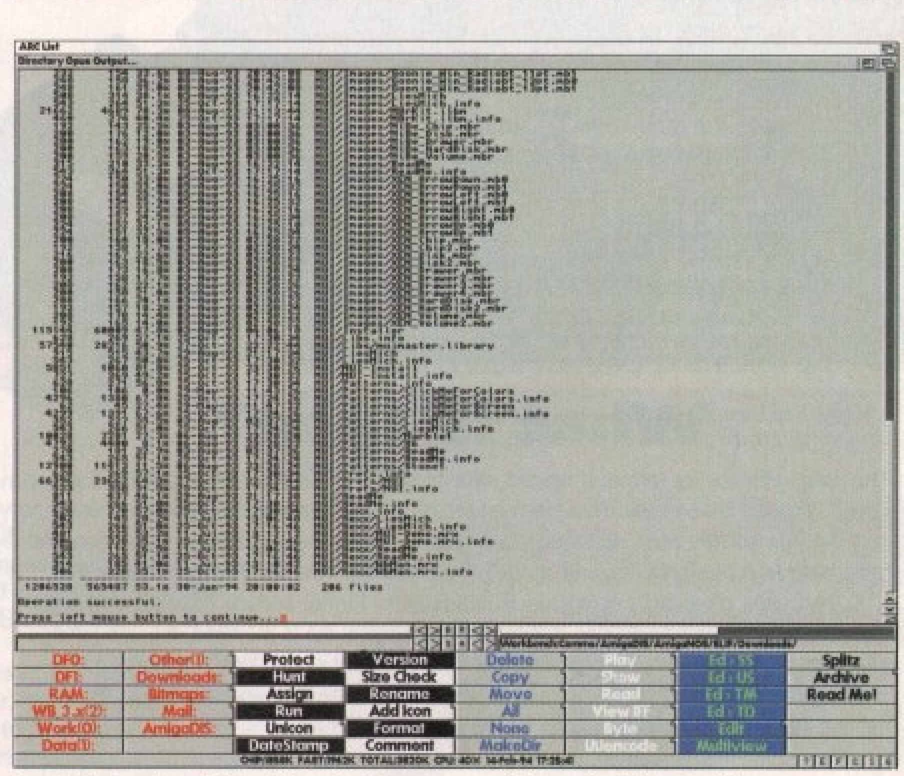
DIRECTORIES

Most people will probably use LHArc from within a directory utility like Directory Opus or DiskMaster which allow the user to select files and directories to archive at the touch of a mouse button. LHArc files are saved with a file extension of .lzh or .lha. My archiver of preference is Lha by Stefan Boberg.

There are several other archiving pro- ➤



Disk Expander can compress files to around 60 per cent in real time



Less flexible perhaps, but traditional archivers are superb for packing files onto disks

grams available for the Amiga. These include Arc, Zoo, Zip and compress files. Arc and Zoo have pretty much been left behind now, and are very infrequently seen these days.

Zip (or PKZip, as they are sometimes known) files are more common on the PC, where they are the standard format. If you intend giving someone something for a PC, it is probably best to archive it in a Zip file rather than LHArc it.

Compress is a Unix file compressor that you will probably only use if you have a modem and an Internet account. When you decompress a compress file (confusing isn't it?) it usually overwrites the original archive, so make sure that, if you want to keep it, you have a copy of the original archive somewhere else.

Arc files are saved with a file extension of .arc, Zoo files with .zoo, Zip files with .zip, and compress files with an extension of .Z.

How to compress

The usual method for compression, especially in archivers, is one of redundancy removal. If you take a long sentence that repeats itself over and over and over you will see that it can be compressed neatly by representing the repetitions with a code and putting the key for the code somewhere in the archive file. Thus, as an example, this paragraph compressed would look something like this:

```
Th{usual me(od for £i|, especially !}rchivers, * |(of )dundancy
)moval. If you tak(a l|g[entenc{(\ )pe\s itself $%$%$you will[e{(\
it can b{£ed ne\ly by )p)sent!g^)petiti|s wi() * %putt!g^key
for^*[omewhe} !^archiv(file. Thus,}s}n example, (+ paragraph £ed
would look[ome(!g lik{(+: *="code"£="compress"$="over "%="and "^="
the "!="in"(="th")="re"+="is"|="on"\="at"{="e ")="a "[=" s"
```

Now this example doesn't work very well because it is too short a piece of text, but the first paragraph is 393 characters and the second is 384. Over a much larger file – this article for instance – the amount of compression can be greatly improved.

The other main method is known as RLE or Run Length Encoding. Faxes and IFF files use this method to keep files as small as possible. It works like this. Take a file that is a mixture of zeros and ones like so:

```
0000000000000000001111111111111111111111111100000000000000000000000
000000111100000000000001111111111000000000
111111100000000001110000000001111000000000000001111111111110000000
000111111111111000000000011111111100000000
```

Run Length encoding changes the file from being zeros and ones and puts a code in their place. It's a very simple code, it just gives whether the sequence should be zero or one and how long for:

```
0:18,1:26,0:29,1:4,0:13,1:10,0:9,1:7,0:10,1:3,0:9,1:4,0:14,1:12,0:
10,1:12,0:10,1:9,0:8
```

The first paragraph comes out as 218 characters, while the second comes out at 87. A massive improvement. However, most files aren't as easy as that.

MASHER

If you're interested in crunching floppies, you can get a program called DMS (or Disk Masher System). This takes a floppy and compresses it track-by-track to another location, ie. your hard drive, or RAM:.

You can't use this archive as it stands though; you need to decompress it back to floppy. DMS expects a disk (it doesn't care whether or not it is formatted) in df0: and proceeds to decompress, track-by-track again, onto that floppy. DMS files are saved with a file extension of .DMS.

And so on to compressors. The first thing that should be pointed out about compressors is that they don't usually compress files as much as archivers do. However, what you lose in disk space you gain in functionality.

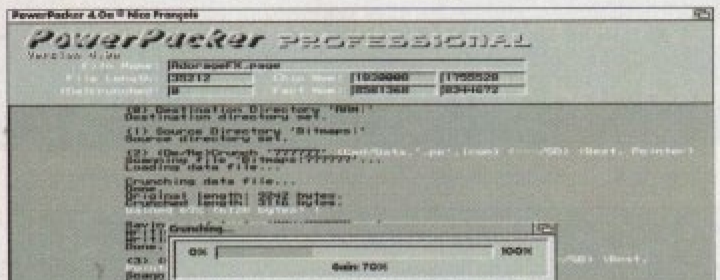
There are two commercial offerings: the old but much-used PowerPacker Professional and the new kid on the block, Disk Expander. Actually, when I say new kid on the block, it's not strictly true. Disk Expander is v2 of a shareware piece of software called EPU.

EPU (and Disk Expander) takes advantage of a system of compression libraries called XPK libraries. Each of these libraries has a different forte. One might compress and decompress really quickly, but offer relatively poor compression rates, while another might take a while to compress, but give outstanding compression results.

The advantage of this system is immediately apparent. You start with a control program that watches for files being written to or read from the disk and then applies the compression algorithm the user has chosen for files on that disk. If you decide that the compression format doesn't give you the results you wanted in terms of time saved or filesize, then all you need do is switch to a different compression library. If the author of a compression library brings out a new version, that is all you need update, not the whole program.

PowerPacker doesn't look at your disk except when reading files. If the file is a program, then PowerPacker automatically decrunches it on the fly; the only thing you might notice about using a powerpacked file is that the mouse pointer, or screen, jiggles and displays strange colours while loading. This is perfectly normal and is a feature of PowerPacker to show it is working.

If your PowerPacked file is not a program, but data, such as a DTP file or a picture, then you will require some extra software to read that file. If the file is text, a standard picture or animation, then the supplied PPMore, PPShow and PPAnim will display it with no trouble.



The best known cruncher is still the most useful and widely accepted

DATA FILES

Otherwise you will need a program called PP (or PowerPacker Patcher), which decrunches data files as they are being loaded in the same way that PowerPacker does when loading a program.

You can also find a shareware program in public domain libraries called PowerData. This solves a problem with PowerPacker and changes it into something more like disk expander. The problem with PowerPacker is that you pack a file. Fine.

Then you load it into a paint package or whatever, and edit it. Then you save it back out. The file is no longer packed because PowerPacker doesn't get called to recompress the file. This is exactly what PowerData does. When you save a file that was PowerPacked, PowerData jumps in and recompresses it on the fly.

PowerPacker also comes as a shareware package with some of the Professional version's features removed, but as it only costs around £15, why not get the full version? There are plenty of other shareware or public domain compressor programs around, the best-known of which is probably Imploder.

There is a package that doesn't really fit into either category, and also some programs that you wouldn't think of as file compression utilities. They all have to do with graphics.

Pegger is an American product designed to watch over your hard drive for Toaster Framestores, 24-bit IFF or Ham8 pictures, and when it sees one being written it automatically catches it and converts it to Jpeg format. Similarly, when a program that can't normally load Jpeg images, like Deluxe Paint asks for an image that Pegger has compressed, it converts the Jpeg image back into a Toaster framestore, an IFF or Ham8 picture, or a DCTV 3 or 4 bitplane image.

This process could also be achieved if you have a program called Rend24, or you use a version of ADPro that comes with a program called Sentry. Both these programs can be set to guard a directory or disk, looking for files to be written. If they see something then they too can convert the image to Jpeg to save space. However, they won't convert the image back to IFF if a program like Deluxe Paint tries to load one of the converted files.

What is Jpeg?

The Jpeg graphics file format is named after its creators, the Joint Photographic Experts Group. This is how it works. The Jpeg compression algorithm takes advantage of the fact that the human eye can't distinguish between as many values of hue, saturation and brightness as a 24-bit display, and "smooths" shades together resulting in a simpler file.

It then uses other data compression methods to further reduce the size of the file. Because saving a file as a Jpeg means that the original file is modified, the Jpeg image will never be the same as the original 24-bit file. This is known as "lossy" compression.

However, depending on the amount of compression, the differences between the original and the Jpeg will almost certainly be too small to notice.

Contacts

Product: Disk Expander
Supplier: Power Computing
Tel: 0234 843388
Price £35

Product: Pegger
Supplier: Ramiga International
Tel: 0782 398840

Product: PowerPacker Professional
Supplier: *AC* Reader Offers
Price £14.95

● The shareware and public domain programs mentioned should all be available from any good PD supplier.

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The key to

Want to unlock the Amiga's vast video potential? Let Gary Whitely guide you through the genlock jungle

Right from the very start the Amiga was a computer built with video in mind. In addition to providing a revolutionary graphics box, the Amiga's designers took care to ensure that it could be fairly easily interfaced with video equipment and provide suitable outputs for conversion to various standard video formats

This meant that any graphics or animations produced with paint, animation, 3D or video titling software could easily be recorded to videotape for posterity. But not always as easily as you might imagine.

For instance, while simply recording the Amiga's graphics to tape can be quite easily accomplished by several models of Amiga (the Amiga 1200 has both composite and RF video outputs, as well as the standard RGB port, for example) combining graphics and video is a more complicated proposition which cannot be carried out directly by any present, or indeed past, Amiga.

Which is a bit of a problem when you consider that video titles (and plenty other video graphics) are often superimposed directly over video images themselves.

So how is it done? What magic boxes make such TV-style visuals possible? How do they work, why would you need one, and how do you get the best from it once you have one? These, and more nagging questions, are the subject of this month's Survivor's Guide.

This might surprise you, but you'd be wrong if you thought a genlock was a piece of hardware you bolt on to your Amiga in order to add titles and graphics to your videos. Not entirely wrong, but certainly misinformed.

Genlocking *per se* actually refers to the process of synchronising one video signal, or piece of video equipment, with another – an absolute requirement if two video signals are to be successfully combined or mixed together.

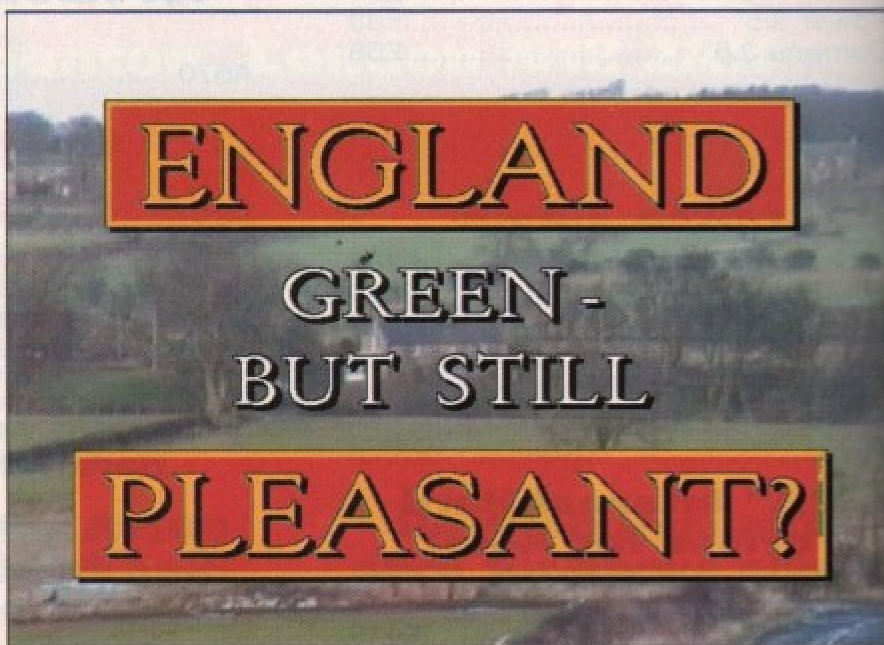
SYNCING

The term genlocking derives from Generate (or General, according to some sources) Locking, which describes the function of syncing the signals together.

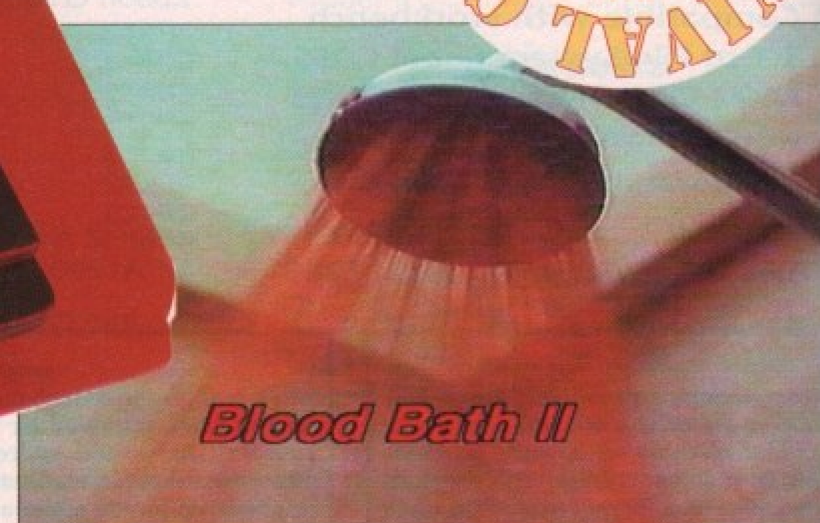
Genlocking is only half the story though, since it is a process called keying which actually superimposes the graphics over video. So we can now see that a genlock must perform several different functions in order to combine video and graphics together. Genlocks come in a wide variety of shapes, sizes and price ranges, and they vary in the number of different functions that they can perform, but the bottom line is that they all enable Amiga graphics to be combined with video images – some more successfully than others, and with more bells and whistles – but combined nonetheless.

Some genlocks have mixing controls to determine the level at which the Amiga graphics will be mixed over video. Others let you adjust the colour, brightness and contrast of the incoming video signal.

Some have built-in RGB splitters in case you have an older, mono video digitiser. All have some form of selection between pure Amiga, pure video and mixed video/Amiga signals. And all have







Simple titling can really lift a home video

success

an RGB input from the Amiga, though not all pass the RGB signal through, so if you use an RGB monitor you'll need to ensure that your chosen genlock has an RGB pass-through.

So how does a genlock work? Without getting too technical (what's the point, you'd only fall asleep) the process of combining (or genlocking) Amiga graphics and video into one mixed video signal requires several conditions to be met.

The first is that the genlock is (usually) connected to the Amiga via the RGB port, though at least one genlock model connects directly to the video port of the larger Amigas.

POPULAR

The second is that the genlock is being fed a video signal. This can come from a variety of sources, including live camera, pre-recorded tape, off-air TV, Laserdisc, CDTV or even another Amiga. Pre-recorded tape is by far the most popular.

It may be necessary for the genlock to be receiving a video input before the Amiga is booted, though most good genlocks have a "free-run" mode which will step in to provide synchronising signals in the event that no external video signal is present. Although this means that it won't be possible to superimpose the graphics over video images, at least the Amiga will keep cheerfully chugging away and you can record graphics direct to videotape, even if you can't overlay them – which you might not need to do anyway. One of the genlock's functions is to read the sync pulses which are present in all standard video signals and derive a new set of timing pulses from them which are used instead of the Amiga's own, internally-generated, clock pulses.

These pulses are passed to the Amiga via one of the RGB-port connections. This is one of the genlock's most important tasks, because in order for the genlocking process to work successfully the Amiga has to take its timing signals from the genlock, and if these are at all unstable then the Amiga may not perform properly, resulting in all kinds of problems.

Once the Amiga is successfully synced to the video signal – in other words the timing of the lines, fields and frames which constitute the Amiga's video display coincide exactly with those of the external video signal – the conditions are right for superimposing the graphics.

In order for the Amiga's RGB output to be mixed with the external video signal it must first be encoded to the same format as the video – which generally means converting it to either composite, Y/C or even YCrCb (a high-quality broadcast signal format) video formats, depending upon the circumstances, and the genlock.

INTEGRITY

In order to maintain the signal's integrity various electronic processes far beyond the scope of this guide are applied, but suffice it to say that without them the genlock's output wouldn't be anywhere as good as it might be.

Colour phasing, PAL phasing and syncing the colour bursts are three functions which are necessary to keep everything on the straight and narrow.

Some genlocks also automatically clip the level of the external video signal, which isn't always a desirable thing – though it does ensure that "hot" colours such as bright reds and blues don't cause the excessive smearing and "noise" problems that they otherwise might.

If you use a genlock then you'll know that it is usually the first palette colour of a graphic, known as colour zero, which is replaced by the video signal, leaving any non-colour zero content to be added over video. This is because the genlock reads the Amiga's RGB video output, as well as a signal output called zero detect.

Every time an instance of colour zero is

➤

Genlocking dos and don'ts

✔ DO supply your genlock with the best quality video signals possible. One important step towards this is to use top quality videotapes if you are playing back from a video deck.

✖ DON'T use unsuitable cables for the video signal. These include audio or telephone cables, bell wire or even mains cable. Use proper video cables (which you can buy from specialist shops).

✔ DO keep connections between equipment as short as is practical in order to avoid introducing unnecessary degradation or interference.

✖ DON'T use mono video input if you need colour output.

✔ DO use a genlock with RGB pass-through and an RGB monitor if possible – your previews will be clearer and producing Amiga graphics will be easier.

✖ DON'T expect broadcast quality from VHS video equipment and a cheap genlock. Quality is usually (though not exclusively) related to cost.

✔ DO use overscan settings to get full screen scrolling and animated graphics.

✖ DON'T try to use RF video signals (such as those used by TV aerials) with your genlock – they won't work because they aren't compatible.

✔ DO make use of Y/C video signals if your equipment can use them. You'll notice a substantial increase in picture quality.

✖ DON'T use very bright colours in your graphics, especially bright reds and blues, as these are very prone to smearing, especially in the lower-end composite formats, particularly VHS.

The genlock connection

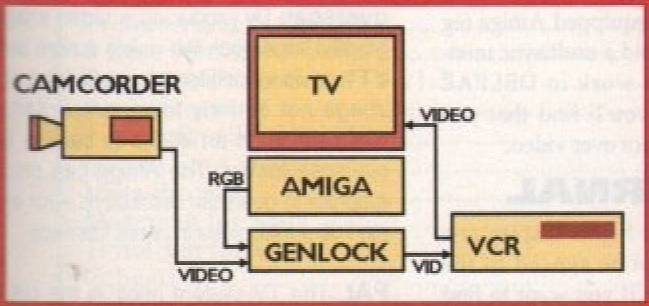


Figure I

There are quite a few different ways that a genlock can be incorporated into a video system; it all depends on what equipment you have available, and how you plan on using it.

I came up with two different scenarios quite quickly, though the main differences between two of them revolve around the number of monitors used, and whether the genlock provided an RGB pass-through to the Amiga.

Figure I shows a fairly basic setup which would probably suit many domestic (and even semi-professional) users. The camcorder can be substituted by a video deck, Laserdisc, CDTV or other video device.

Some cost savings are made by using just one monitor (which could even be an ordinary TV), though producing graphics may be more difficult since the quality of the Amiga's screen display won't be as good as when an RGB monitor is used.

It's also more difficult to see everything that you're doing simultaneously. A second monitor attached to the VCR output will help if you can stretch to it.

The obvious difference between Figure I and Figure II is the increased amount of equipment being used. In fact this represents just the video side of things – I've not included sound kit (or some synchronising connections) for the sake of simplicity – but this kind of setup wouldn't be considered unusual in a professional video studio.

By placing the genlock downstream of the vision mixer it is possible to superimpose graphics over video while being able to add mixes, wipes and other transitions to the video unhindered.

Of course, you could add another monitor to view the vision mixer output alone, uncluttered by any overlaid graphics, but it's not a bad setup as it stands!

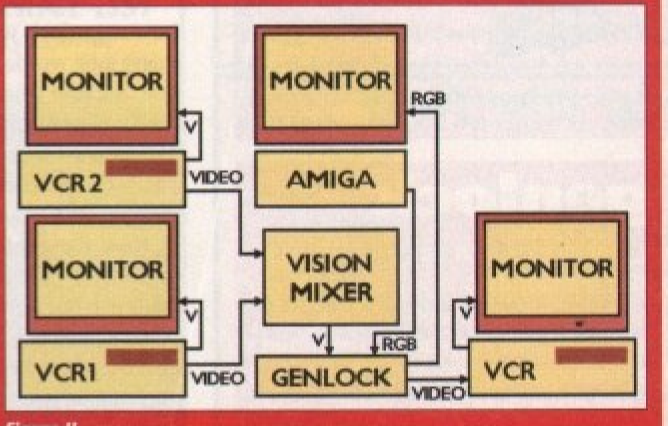
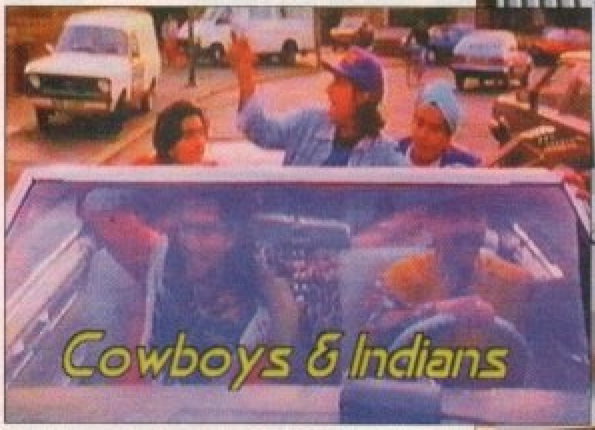


Figure II



With any decent genlock, adding titles to video is easy



Composite PAL genlocks are generally cheaper, but Y/C gives better quality

detected by the genlock it quickly switches its output to be the incoming video signal. When no colour zero is present the output is switched to Amiga graphics. By switching between signals extremely rapidly, all incidences of colour zero are replaced by video, resulting in the non-colour zero graphic content appearing to be superimposed over the video images. This switching system is known as keying.

Incidentally, you might be aware that some genlocks also provide inverse keying. This is where all colours but colour zero in the Amiga graphics are replaced by video, providing a through-the-keyhole type of effect, which is why this type of keying is sometimes called keyhole mode.

So we can see that synchronising the Amiga to the external video signal and then combining its graphics with video by keying are the two essential parts of genlocking graphics and video.

But that's not necessarily the end of it, because some genlocks are created more equal than others and have an extra keying system based on something called RGBI (where I stands for intensity) which, like zero detect, is an output from the RGB port used to send control signals to the genlock, this time based on the intensity of a colour, rather than specifying just whether colour zero is present or not.

The RGBI keying system is often called foreground mode (to distinguish it from colour zero background mode). RGBI permits any colour other than colour zero to be used selectively as a key colour – for instance palette colour one could be green, and the keyer circuits in the genlock could be preset to accept this as the key colour – so that keying would take place each time such a green was detected by the switching circuits (this time driven by the RGBI output). In most cases foreground keying isn't necessary, and regular colour zero keying should be quite sufficient for most jobs, though it can be useful to have the choice sometimes.

> ***'Get down to some creative video work...'***

One last point to note is that genlocks can only work with Amiga display modes which are capable of being genlocked. This might seem like an obvious point but if you have an AGA-equipped Amiga (eg an A1200 or A4000) and a multisync monitor and commonly work in DBLPAL mode, for instance, you'll find that you cannot genlock graphics over video.

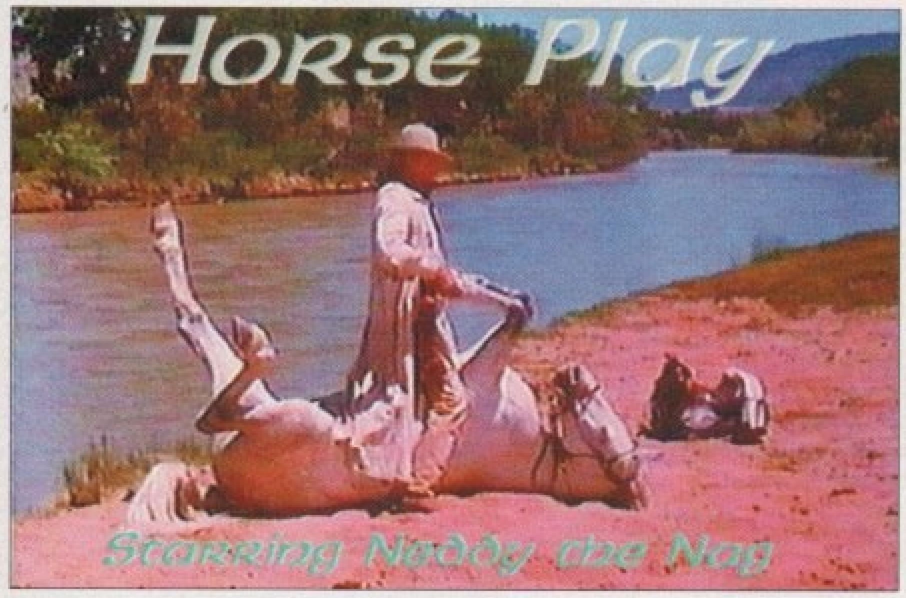
EXTERNAL

This is because the higher display rate of the Amiga cannot be synced to the external video signal. If you want to find out which display modes can be genlocked, open the ScreenMode requester from Workbench/Preferences and you'll find the relevant information displayed there.

And that's my attempt at explaining how a genlock works without using too many long words or too much obscure jargon. Because when it comes right down to it all you probably really want to do is just to plug a genlock into your Amiga and get down to some creative, nay even artistic, video work.

How the genlock actually does what it does is probably the least of your concerns. But if the quality of your work is important to you, read the box on dos and don'ts. A few simple tips could make a vast difference to your output.

Happy genlocking!



Buying a genlock

Unless you're really strapped for cash, buy a genlock which has an RGB pass-through – you'll be able to use your Amiga RGB monitor then. If you use S-VHS or Video 8 then go for a Y/C-capable model for improved picture quality.

Don't worry about extras like colour and brightness correction, they aren't strictly necessary. Quality is more important than quantity, though I think you'll probably find the ability to fade graphics up and down over video useful – unlike the paltry selection of wipes which some genlocks provide.

Jargon buster

composite video A standard video signal commonly provided by most video equipment. Used by genlocks, video mixers and other video applications. Called composite because it combines brightness (Y), colour (C) and synchronising data into a single signal.

field Half of an interlaced frame of video containing either odd or even scan lines.

frame The basic video picture provided by two interlaced fields. In PAL this contains 625 horizontal lines of information and takes 1/25 of a second to display – hence there are 25 frames for every second of video.

genlocking Commonly (and incorrectly) understood to be the overlaying of computer graphics over video images by using a genlock. Genlocking actually refers to the process of synchronising the Amiga (or other piece of equipment) to an external video signal.

interlace The method used in video to display more information on screen by first displaying one field and then its counterpart. As the fields alternate every 1/50th of a second in the PAL system, the human eye is fooled into thinking it sees a full image (or frame) rather than the two distinct sets of horizontal lines which make up each field.

keying An electronic video process which replaces either a selected brightness (lumakeying) or colour (chromakeying) within one video signal (for example an Amiga graphic) with video images from a second source, such as a camera or video recorder.

overscan By producing a video image or graphic larger than the visible screen area of a TV or video monitor the possibilities of that image not entirely filling are drastically reduced. Such an image is said to be in overscan format. The Amiga can produce graphics in overscan resolutions – for example 736 x 576 pixels in hi-res interlace.

PAL The TV system used in the UK and several other countries.

RF video A combined audio and video signal designed for transmission at radio frequency. Used in TV aerials and video recorder-to-TV applications. Not suitable for genlocking, vision mixing or digitising work.

RGB video The Amiga's native video system, providing red, green and blue signals (and synchronisation information) to provide better quality output than RF, composite or Y/C video signals when displayed on a suitable RGB monitor.

Y/C video An improvement over composite video as the brightness (Y) and chrominance (C) signals are processed separately, resulting in better picture quality. Y/C is commonly used in S-VHS and Video 8 applications.

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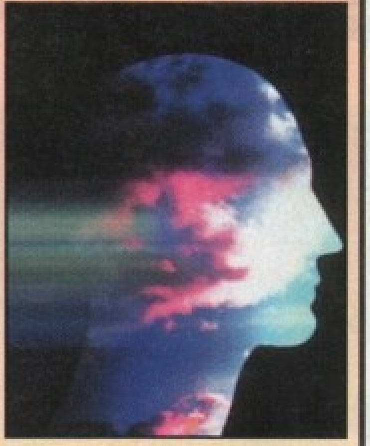
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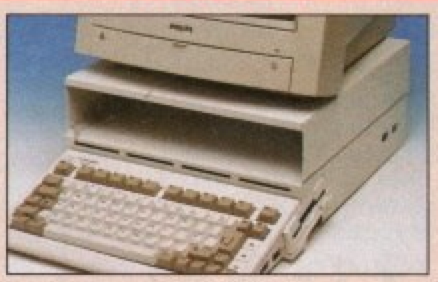
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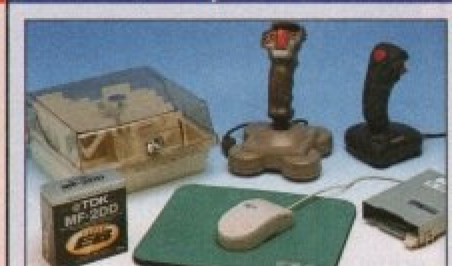
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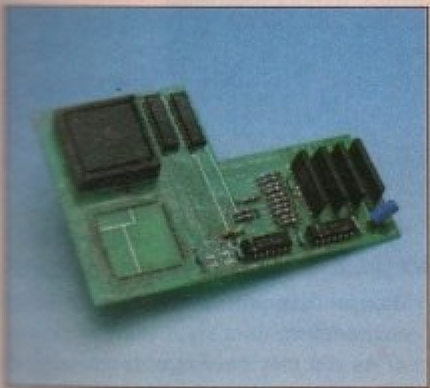
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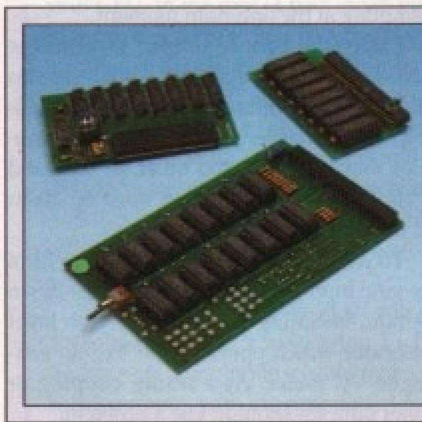
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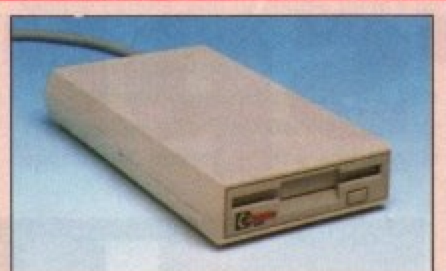
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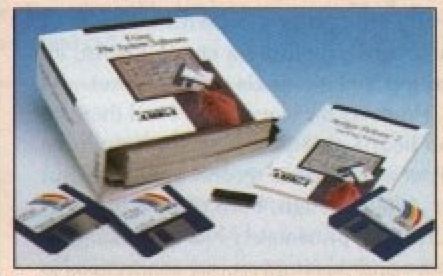
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Vorsprung dürch

Paul Austin puts Toccata, the latest in German audio engineering, to the test

It's been a long time coming, but at last *AC* can provide the definitive review of the very latest European import. Although the necessary Toccata hardware has been in the office for some time, the lack of any documentation has kept it firmly at the back of the goodie cupboard.

Thankfully, postie has finally come good with English documentation for the Toccata sampler and its accompanying Samplitude editing software. However, before diving into the aforementioned software a brief introduction to the hardware might be wise.

As is rapidly becoming the norm in the world of 16-bit sampling, a Zorro slot is an essential for Toccata – which obviously puts the A1200 and below out of the picture.

Assuming you have the necessary slot, adding the various I/O connections is pretty straightforward with the back of the board providing a stereo line-in, an aux input plus a single stereo line-out.

However the story doesn't end there, as the board also provides a microphone input alongside a second auxiliary. But strangely enough, both these additional ports sit approximately half-way along the board and therefore require connections to be trailed into the machine.

SET UP

Assuming you supplied the necessary cabling, inputs, outputs and amplification, it's time to boot the control software and set up the board. Fortunately initialisation is taken care of on boot-up via WB Start-up/User Start-up so all that's required is adjustment of the odd slider plus selection of the required input.

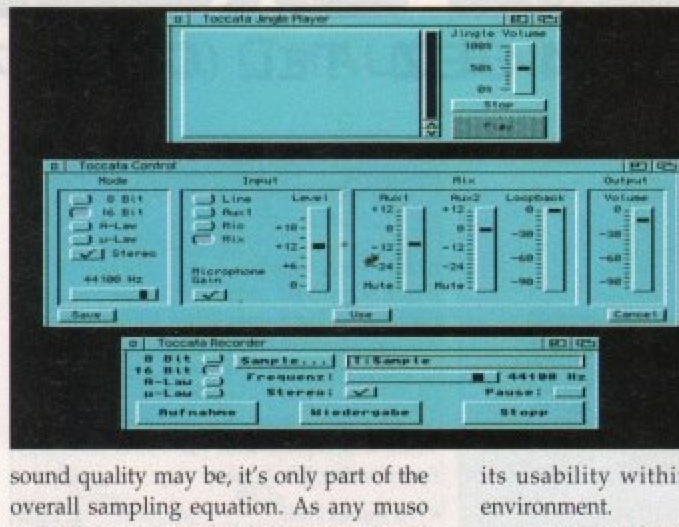
As you've probably guessed I/O is one of the board's strengths and this is reflected in the control panel which boasts both 8 and 16-bit sampling in both stereo and mono, plus the essential sample rate slider which offers rates between 5,513Hz and the ultimate of 48kHz – which is the standard for DAT recordings.

Not surprisingly you're provided with Line, Aux1, mic and mix options, with the last two being particularly notable in that the mix feature allows both aux inputs to be combined and recorded simultaneously as part of the same sample.

Although mike input isn't particularly unique, unusually it does benefit from a very useful gain option which means there's no need to pre-amplify the input externally prior to sampling. Obviously to adjust the mix, some form of monitoring is essential and this is achieved via the board's loopback feature which enables the selected signal/s to be monitored constantly, thereby allowing you to initiate sampling at the optimum moment.

Lastly the overall output level of the board can also be adjusted – however this shouldn't be confused with actual recording levels. In order to avoid recording samples that are either too quiet, or too loud ("clipped"), close attention must be taken to the actual input levels.

To assist this you're provided with a generic input slider as well as a pull-down option, initiating a real-time stereo level indicator which operates just like an analogue VU meter. As a result, clipping or quiet samples shouldn't be a problem.



Toccata's basic set-up screens in action. Unfortunately you'll have to move to Samplitude to edit your imports

Assuming you have a signal with appropriate recording levels, the next task is to activate the Toccata recorder, select a location and format for your new sample, and hit the Record button. The new sample will then be recorded directly to hard disk or RAM, depending upon your particular preference.

Once safely recorded you can play back direct from the recorder, or alternatively load up the Toccata jingle player and audition your latest import from there alongside, any others you may have in the same directory.

As you've probably guessed, basic set-up and recording are very straightforward, but how does the board fare when it comes to sound quality? Well as you'd expect from the creators of the VLab range of digitisers, Toccata's sound quality is exceptional. Indeed, after extensive testing I'd say it's probably the best yet for the Amiga.

And better still, the default hardware also supports hardware compression which provides a very respectable disk space saving in exchange for a slight degradation in the signal-to-noise ratio.

In the case of 16-bit samples, this translates to an SNR of 70dB compressed, as opposed to 96dB uncompressed.

However no matter how impressive the sound quality may be, it's only part of the overall sampling equation. As any muso will tell you, a sample is only ever as good as its editor – or in the case of Toccata, as its usability within the overall Amiga environment.

As you may have already guessed, the board is much more of a multimedia



The VLabY/C connection

As I mentioned earlier, the creators of Toccata already have an impressive track record in Amiga video with their premier product, namely VLabY/C, a digitiser widely regarded as the premier video grabber.

One of the major reasons for such acclaim is VLabY/C's ability to grab sequential video images via IFR frame grabbing option which allows multiple passes over a defined section of video – thereby building up an entire, frame accurate sequence.

Impressive stuff, but thanks to Toccata that's only the tip of the iceberg. Now, using the 16-bit talents of the board, full 16-bit audio can also play a part in the equation.

To combine the two, all that's required is a click on the Toccata option within the IFR control panel and the process becomes totally automated, the end result being a perfect 16-bit soundtrack to accompany your 24-bit grabs.

Pro options

Samplitude Pro II comes as a upgrade option and provides much improved Midi functionality including Midi-based sample dumps and access to the Maestro DAT backup system, which not only allows system backups onto DAT, but also pure digital recording and mastering via Toccata.

board than a traditional Midi-friendly direct-to-disk recorder. However considering its target user base it appears curiously lacking in some basic multimedia requirements, the most notable of which is the lack of direct ARexx support. As a result, its use within Scala or MediaPoint productions would appear tricky at best.

Another curious aspect is its affinity – or perhaps lack of it – to Midi. Although an upgrade to Samplitude ProII makes its possible to dump Midi data to a suitable sampling keyboard, the basic version has no direct Midi connection, so alas there's no way to transport or trigger samples via Midi.

As a result there's also no way of using the card under direct sequencer control, and even if this were possible, there's no means of pitch-shifting existing samples. As a consequence, anyone in the market for a pseudo-sampling keyboard had better look elsewhere.

Add to this a lack of support for that videographic and musical essential SMPTE timecode, and Toccata's place in the market becomes rather difficult to pin down.

In its defence comes the accompanying sample editor Samplitude. As you've probably spotted, the basic Toccata software suite has a drastic lack of editing options and as a result Samplitude plays an essential part in the overall Toccata equation.

As you can probably tell from the screenshots, Samplitude is essentially very similar to the vast majority of 8-bit Amiga sample editors, and of course there's no reason why you can't operate Toccata as an 8-bit sampler if you wish.

For the old guard Samplitude will be a very familiar with the usual cut and paste operations, mixing, fading and special effects alongside sample shifting, amplitude control and so on. In short all you need to manage and edit your creations.

On a more glamorous note, Samplitude also offers the odd power feature, such as very advanced range control. Thanks to this feature you can select an infinite number of ranges within the sample and then employ the program's playlist feature to sequence the various ranges together.

To do this you're provided with a mini single-track sequence from which any one of the ranges can be selected and dropped into the sequence along with a user-definable repeat. Once all your ranges are in place you simply hit the play button and the playlist kicks into life, leaping around the sample to run the sequence.

PROJECTS

Another impressive element is the program's ability to combine and split projects. A project is simply another name for a sample which in the case of Samplitude can be either mono, stereo or quadro projects.

As you've probably guessed, thanks to Samplitude Toccata can play twin stereo samples simultaneously which can either be built up from four individual mono samples or twin stereo recordings – and of course any four-track sample can be broken down either into stereo or mono for additional editing if necessary.

ARexx is another added bonus of the Samplitude environment. Although ideally Toccata should have an ARexx port all of its own, at least Samplitude can provide an alternative window into the world of multimedia – if by a slightly roundabout route. AC

The speed of sound

Like most power exploits, 16-bit sound makes heavy demands on both disk space and your CPU. In the case of disk space the equation obviously varies according to the sample rate and format you require, but to give you an idea the average stereo sample recorded at 41kHz – otherwise known as CD quality – will require approximately 11Mb of RAM per minute.

As for the CPU, a 68020 is the lower limit. Using this you could expect to record a stereo sample at 32kHz but that would be the upper limit. For full CD or DAT quality an 030 processor would be essential, while quadro samples really need an 040.

Basically, with its various limitations Toccata is very much a matter of taste. The actual sound quality is exceptional which could carve it a niche as a direct-to-disk mastering system.

Obviously the link with VLab will ensure at least limited success in the multimedia department courtesy of existing VLabY/C users, while the convoluted approach to ARexx – via Samplitude – could make it an appealing investment for the hordes of Scala fans. However, with the strong market position of the SunRize boards and their existing links to all kinds of software, it's difficult to see how Toccata will successfully break into the mass market.

Basically the problem boils down to software. If Macro Systems can continue to support and build on their existing hardware, Toccata could well become a world beater – the question is, will they? Watch this space to find out.

SYSTEM ESSENTIALS

RED = Essential YELLOW = Recommended

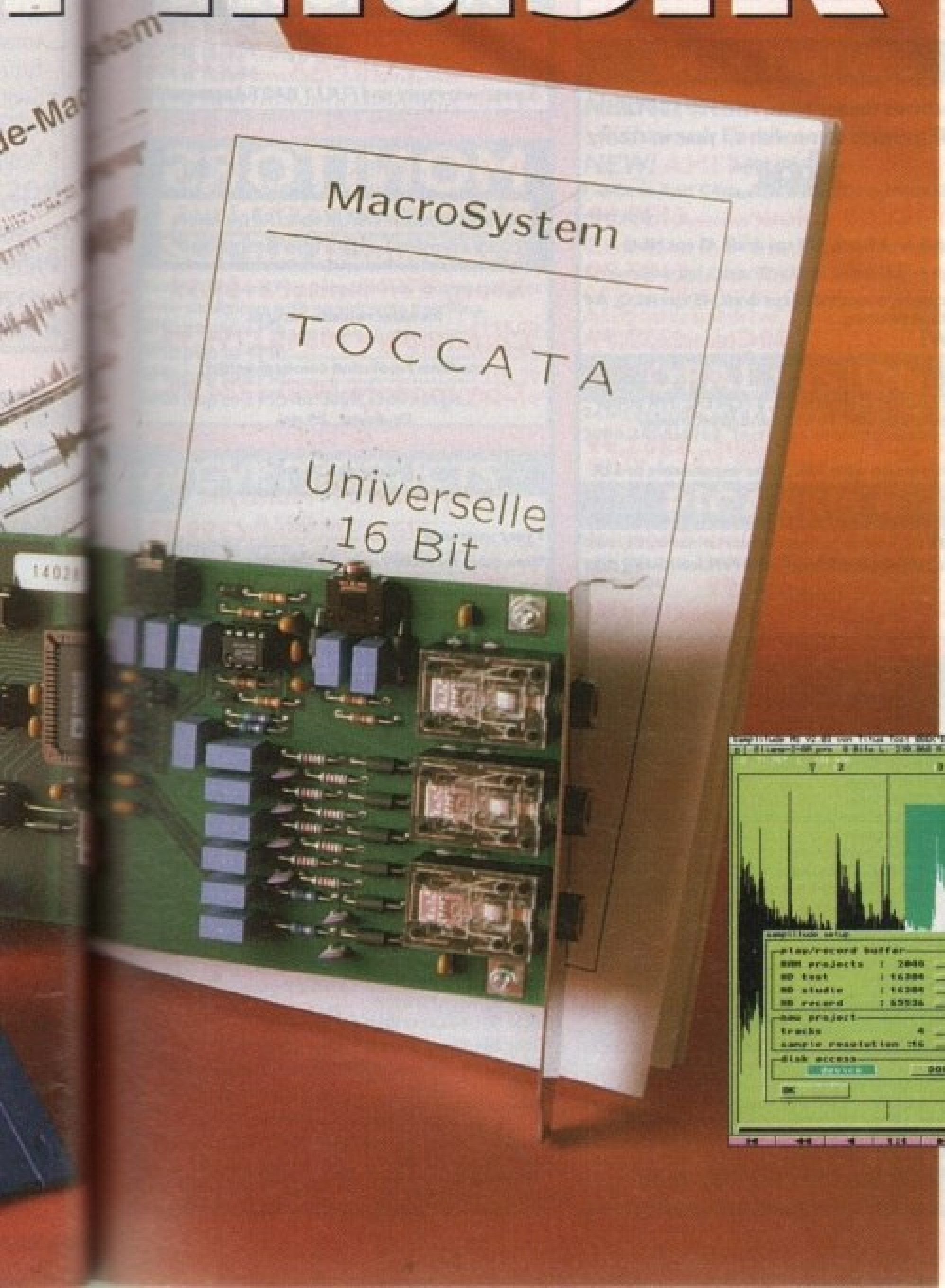


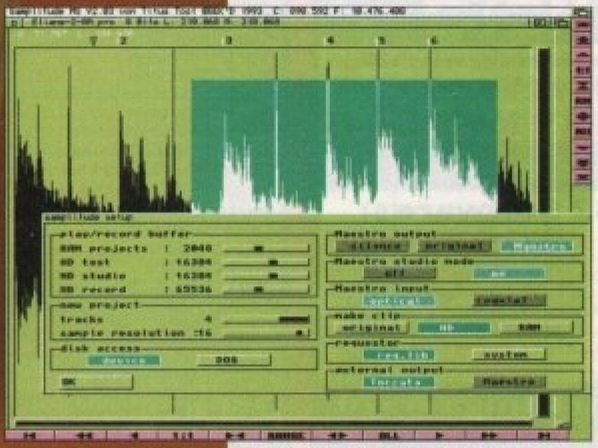
The bottom line

Product: Toccata
Supplier: Amiga Centre Scotland
Price: £370
Tel: 089687 583

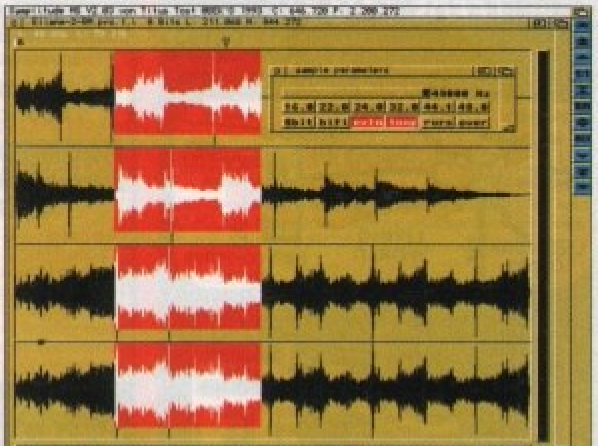
Ease of use: 8
Implementation: 6
Value for money: 6
Overall: 7

musik





Assign your buffers and let Samplitude do the tricky stuff



Four track simultaneous playback at DAT quality – impressive stuff

12.6

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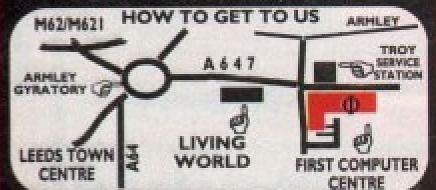
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GVP

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28 Mhz, uses A500 side port so there is no internal fitting

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All disks are 100% error free guaranteed
New High density 3.5 inch bulk and branded
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Deluxe Music Construction Set v2..............£59.99
Pro Midi Interface by Microdeal..................£24.99
Stereo Master...£29.99
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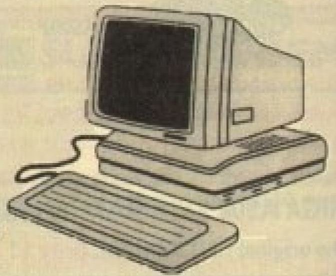
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Ezra Surf's Postbag

ESP

Star Letter

After reading your news story about Citizen selling their ProLaser 6000 direct to the public, I had a thought. Why don't Commodore sell direct to the public? Maybe then they could sell the CD32 at £199 or £149, the A1200 at £249, and the A4000/030 for £699 or even less.

This would allow their machines to sell at very competitive prices, could easily drop below PC prices, and could blow away Sega and Nintendo!

Sales would rise and Commodore could still make a healthy profit. Dealers could still sell Amiga hardware and software, so it wouldn't be that much of a problem for them to lose Amiga sales.

If there are more Amiga users, sales of hardware and software will increase, making up some of the difference the dealers would lose by not selling the Amiga range.

At first it would cost Commodore lots of money to start a sales division. They would have to build Commodore shops and advertise extensively, but they would get their money back.

Finally, can people stop complaining about Commodore and the new chip sets? Enjoy your Amiga! I paid £1,500 for my A4000/030 with 240Mb hard drive and 6Mb RAM only to find the same machine after a few months would have cost me only £1230.

Do I feel ripped of by Commodore and feel the urge to buy a PC? No way. My A4000 is still a great machine and I enjoy using it. It's obvious that the A1200 and CD32 are going to remain the same, the A4000/030 is going to be replaced by the AA+ chipset, and the A4000/040 is going to be replaced by the AAA chipset, but I don't care. I'm looking forward to the day, actually.

The Amiga has a future, no matter what model you own.

Steven Browne, Camberley

Commodore UK didn't put you up to this letter, did they? Seriously, though, I'm glad you haven't been swamped by the waves of gloom encouraged by some sections of the Amiga world since Commodore's financial figures were announced.

Yes, the Amiga has a very bright future, and yes it will develop as it goes on, with a AAA chipset machine appearing some time this autumn (we believe) to be followed by the much vaunted Risc-based Amiga with Windows NT capability.

However, your idea for selling Amigas direct to the public stinks. Sorry, but there you have it.

Commodore's success has been due in no small part to the efforts of third parties. Everyone from the small high street computer store to the peripherals manufacturers have supported the Amiga by building businesses around it (making money in the process, of course), and if the intricate dealer network was damaged the Amiga would suffer.

Cutting the high street man with his technical support and advice out of the Commodore chain would reduce the machine's presence on the high street and lower the standards of service we receive. In addition, the dealers would probably drop the Amiga altogether if the biggest chunk of business was taken away from them.

Direct sales are, more or less, available through the mail order companies, and if Commodore were to invest in a chain of shops, they would be forced to sell the Amiga at a higher price than present to recoup the investment. Sorry, but as business plans go, this is a concrete rowing boat.

Analogue woes

I have an Amiga 1200 on which I play Frontier Elite II and Knights of the Sky. Recently, I purchased an analogue joystick but find that it will not work on these games.

Can I "fix" this or is there some way I can add the software to my joystick? The games are brilliant but the digital joystick I also have is driving me to drugs and drink.

Andrew Curran

I'm afraid that if a game does not contain the code to accept analogue joystick input, there's nothing you can do about it. The number of Amiga games which don't accept analogue joysticks is a reflection of the fact that most Amiga joysticks have always been digital, whereas most PC sticks are analogue.

On most games, you can get round the digital controls by selecting mouse control, then plugging in a Gravis Mousestick, but these are expensive and only for the dedicated flight buff.

Write to the games companies concerned and express your preference for analogue control if you want to see it included in future games.

You might also ask Digital Integration why their superb Tornado game accepts analogue joysticks but has no facility to calibrate them, making the option about as much use as a chocolate teaspoon.

Game over, man!

Just the other day, I finished a rather long and arduous computer game (I won't say which one, as most of them are culprits these days) which rewarded my perseverance and dedication with a load of rubbish.

The final screen, at which I had expected a groovy animation, some enthusiastic "well done" back-thumping, or even just a nice tune, was no more than a static, badly drawn picture with a few words on it. Anti-climax or what?

It seems to me that the biggest problem with the games industry today is that they have forgotten the basic psychology of game playing. We don't do it just to spend some time – there has to be an objective or series of objectives and we should be prompted towards them and rewarded when we achieve them. Otherwise, what's the point in finishing a game?

All right, you get that inner glow of self-satisfaction, but this is dampened by the feeling that the programmers didn't think finishing the game they themselves programmed worthy of congratulation or even much note. Is this another indication of the get-rich-quick attitude so many software people have these days?

Whatever happened to good old-fashioned games fanatics writing the sort of games they'd love to play themselves? It's by writing from this motivation that classics are born, not by marketing men with slide rules and calculators where their pleasure centres should be.

Would Lemmings, Populous, Manic Miner, or Elite have been half as good if the authors hadn't written from a sense of fun and love of games, as they so obviously did? No!

So the message is: fire the marketing men and hire some of us unemployed games players – we'll keep you right, and lower the unemployment figure at the same time!

Alan Garrity, Portsmouth

Hmm – this is a little extreme as reactions go. Why should you get so het up about an end-of-game screen? I suppose your criticisms are valid, but most of the classic games you mention had no decent victory screen either.

On the other hand, modern games design does seem to concentrate too much on graphics and sound to the expense of playability, but the game players, encouraged (perhaps) by the games magazines, are as much to blame as the software companies.

When a preview appears in an Amiga magazine, all you see of the game are some screenshots, and if the graphics displayed by these static, miniscule representations of the game are colourful and well drawn the public responds by upping its expectations.

The games companies, regardless of whether they are partly responsible for the expectations of their customers, respond to what they feel people want from them.

Only when people remember that design and playability are the most important aspects of any game will the situation change. Until then, games houses will feel free to create beautiful looking games with little or no depth to them, because that's what the public demands.

Hollywood has been phoning potential customers for years to try out movie ideas on them before investing millions in actual production, resulting in bland but spectacular films such as *Die Hard* and *Jurassic Park* (heavy on dinosaurs, light on plot) and it can't be long before the spiralling costs of games production starts to force games companies to play even safer.

If we all want CD-ROM games with masses of graphics and music (both time-consuming and expensive to produce), we'll have to accept that the games houses will be more and more cautious about which projects receive the thousands of pounds of development cash.

Your own tastes and demands are, in large part, the key to what the software houses will produce, so it's up to you. ➤

Piracy sucks

I'll get straight to the point. Piracy – it sucks! I used to be the owner of a Mega Drive and Mega CD, but after paying £40 to £60 for a game I thought "sod that, I'll sell up and buy an Amiga". So I bought an A1200 and it's superb.

However, since buying it, I found that people are getting "cracked" games from bulletin boards. Why do they do it? Can't these people see that they are ruining the best computer in the world?

If I can't afford to buy a game I don't just think "oh, I'll just copy it". It would be easy to do so, but Amiga games are so much cheaper than console games anyway, and much better (especially the AGA ones).

I say to the Amiga-owning world please, please don't let the Amiga games scene die. Buy the game, don't copy it.

Craig Bowman, Durham

Your comments would, I'm sure, be echoed by every software company in the world, and not a few sensible Amiga owners as well. However, so long as there are illegal copies selling for less or even freely available through cracking networks, there will always be people willing and eager to take advantage.

We will never dampen the demand for pirated games without dramatic price cutting, and as the games world seems unwilling to take this step, we must hope the long arm of the law can be used to good effect. Don't think this problem is restricted to the Amiga, though.

The PC world is as rife with piracy as the Amiga one, but for some reason the games companies still see Amiga piracy as a bigger threat, perhaps because the Amiga press and the law-abiding sections of the Amiga community have made such a big issue of piracy over the years.

The bitterest pill to swallow is that our reward for continually assessing the threat from software thieves is to be treated as thieves ourselves.

Why else should many games be hard drive installable on the PC but not on the Amiga if not because the software companies think we are thieves and PC owners are 100 per cent honest?

Ezra Surf's Postbag

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to reading your letters and selecting the most interesting for publication. Drop him a line at:

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Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

Scion-ara?

As I am interested in tracing my family tree, the Scion program on a recent CoverDisk seemed just the thing until I noticed that it only works with WB2 and better. Can you tell me if there's a Workbench 1.3 version so I can use it with my A500?

Chris Butcher, Romford

Scion's author, Robbie Akin, neglected to include his address in the main program's About screen or in the main manual, but Scion has been around for a while and there should be an older WB1.3 version.

Formerly known as Arjay Geneologist, Scion is now in v3, so if anyone out there can suggest where older versions might be available, or if the author can contact us, we'll pass on the information. Failing this, try one of the PD houses who advertise in this magazine.

RISCy business

Having read of Commodore's plans to use RISC in their next generation Amigas, and perhaps even the PC Power chip from Motorola, I was wondering if we can look forward to a period of cross-machine compatibility. If so, it wouldn't be before time.

The Amiga and the Macintosh already use the same CPU, yet Mac emulators are still more expensive than Macs themselves once you've bought a hard drive and some extra RAM to dedicate to the Mac side. Now if everyone's taking a step forward, why can't they all take roughly the same one?

I was one of the early Amax users but have recently switched to Emplant, and I can recommend the emulation road to anyone. I know it isn't the panacea sometimes claimed for it, but running two computer from the same box makes life so much easier when, like me, you use a variety of computers at home and at work.

The Amiga has the advantage of cheap and highly efficient software, especially in graphics and 3D, while my Mac side runs expensive professional DTP and design packages I've borrowed from work. If I can put aside enough for an optical drive or a Syquest, I should be able to transfer work from home to office and back again with supreme ease.

Don't the major manufacturers see the benefits? Why don't they open their eyes to the flexibility we the paying public are asking for?

G Bowden, Dumbarton

The Power PC chip is indeed planned for use in the next range of Macs and has been mooted as a possible CPU in the A5000, but don't expect the PC world to take it on board.

Windows NT has been mentioned as a crossover point between the Pentium 586 and the A5000, but again this is only an early speculation fuelled by unguarded comments leaked from Commodore before the company's finances sank into the doldrums. In short, don't hold your breath.

AGA upgrade

I was reading in one of your magazines about a conversion to make the A500 into an A1200 for less than £150. I don't know which magazine it was, but I'm very interested.

Apparently, you fit a motherboard to the A500 which has all the 32-bit, AGA, and CPU chips to go with it, and I would be grateful if you could give me as much information as possible.

A M Teasdale, Middlesborough

The conversion you write of was offered by an American company called Copperhead Technologies and is a straight motherboard replacement where all that is saved of the original A500 is the power supply, plastic casing, keyboard, and floppy drive.

We hear that Copperhead are a little difficult to contact by phone, so for further information, write to them at:

Copperhead Technologies
104 Jay Street
Schenectady
NY 12305
USA

Video CD not good enough

Having read your CD32 supplement in the November issue, I must complain about the Video CD comment on page four. The article states that movie buffs will be the first to jump on Video CD.

How false and misleading! Any well informed person has to know that the self-respecting film lover wouldn't even consider the Video CD option, not to mention abandoning the amazing Laserdisc format because Video CD's picture quality is only slightly superior to the ageing VHS.

I mean, who would be stupid enough to invest his or her money on such a new system just to watch movies with picture quality struggling to compete with a very old one?

Oh, I forgot to mention the incredible VHS-beating Video CD features, such as 74 minutes on a disc and no record facility.

A Laserdisc player (getting cheaper and better every day) can offer tremendous picture and sound quality with full wide screen and Dolby Surround Pro Logic support combined with a huge availability of films, operas, and music videos. This includes the very latest blockbusters, and not just cult movies.

It's all quite clear, I think, and the parallel between Laserdisc and Video CD was, to say the least, unfortunate. I'm fully behind CD32, even the use of FMV for games (though Sega's new LaserEctive system can deliver much more), but when it comes to movie watching, Video CD is ridiculous.

Alex Poledouris, Athens

Well, so far the only people who've been stupid enough invest heavily in Video CD have been Polygram, Paramount, Warner Brothers, and just about ever other major player in the film and music businesses.

There's no guarantee, of course, that these poor misguided outsiders are well informed, but I think we can safely assume they won't hang back from making the most of their investment.

Laserdisc is now, and always has been, a fringe format and one which has always been an overpriced resort for movie snobs and fanatics. The film buffs we mentioned in our supplement, almost to a person, will never even have seen a Laserdisc in action, never mind know one of the tiny band of people who own one.

Agreed, Video CD isn't of hugely better quality than VHS in absolute terms, but it is still far better. The digital stereo sound on a Video CD will never suffer from hiss, there will never be white lines on screen, no problems with tracking, and no need to fast forward or rewind.

Remember that audio tape can sound just about as good as a CD when first bought, but try the two after six months and hear the difference.

With the convergence between movie, music, and games industry settled on as Video CD, Laserdisc can have all the technical advantages it wants and will still be superseded.

Pole position

Stevie Kennedy takes A4091, the UK's first Amiga SCSI-II hard drive card, for a test drive

When the Small Computer Systems Interface (SCSI) became an industry standard, it was only a matter of time before the demands of a baying populace forced the engineers to produce a successor.

Not content with SCSI's speed, ability to control up to seven devices including scanners and printers and economical use of processor time, the market wanted more.

What the Tefal men came up with was the imaginatively named SCSI-II, a new breed of interface with maximum data transfer rates up to a theoretical ceiling of 10Mb per second and access times which take your breath away.

Until now, SCSI-II was unavailable on the Amiga, but the release of DKB's A4091 at last fills the gap. Originally a project hatched by the Amiga in-house development team, the A4091 was farmed out to DKB when Commodore halted the project to concentrate on the pressing task of survival. Only by putting everything into making and selling Amigas could Commodore keep afloat, and to the relief of those who had been waiting for the A4091, DKB stepped in.

Fitting in the 32-bit Zorro III slots found in A3000 and A4000 machines, the card has no accommodation for extra RAM of its own, but offers a SCSI-II through port and a set of rear mounted dip switches for setting the board's various SCSI options.

Different switch settings cater for internal and external drive mountings, the new fast bus mode, and the host ID number to facilitate the addition of a drive to an existing system.

New active termination technology is also offered in the shape of a terminator pack which the user can attach to the end of the SCSI chain, thus avoiding the old fashioned method of (in my case, anyway) flicking little resistors across the room with a screwdriver to the accompaniment of much profanity. As the terminator pack dangles worryingly from the end of the SCSI cable, I was a little worried about where it might end up, but the small PCB is almost entirely encased in glutinous insulating plastic, so there should be no chance of a disastrous short circuit.

Due to the lack of space in an A4000 Zorro bay, a handy length of cable is supplied to enable the connection of a drive mounted in the second 3.5in floppy compartment, and with the dip switches it should be relatively easy for inexperienced users to add extra devices. The manual, though, could be a little more expansive on some points.

Hard drives, and SCSI drives in particular, are a source of much confusion (even among many so-called experts) and the 40-odd page manual doesn't help much.

EMPHASIS

There are good, clear instructions on fitting the card and any accompanying hard drives, but with a little more on why things work and more emphasis on trouble shooting would make things easier for nervous users (or most of us, in other words).

One note for potential buyers of the A4091 is that many of the older A4000 machines contain an early version of the Buster chip which, while not ruling out the use of SCSI-II, negates a great deal of the speed benefits.

Without an upgrade from Wang, entailing the replacement of the motherboard if your Buster is surface mounted, transfer speed will be little more than 2Mb per second.

This aside, I have no hesitation in recommending the A4091 to all those involved in productivity work, particularly direct to disk sampling, 24-bit graphics, and other storage-intensive activities. Bung an A4091 in an Amiga used for such purposes and life will never be the same again.

AC

Lap record

The A4091's speed is, of course, impressive but it is difficult at the moment to gauge exactly how fast the card will work as no good SCSI-II testing software could be found in time for the test.

Most existing benchmarks fail to stretch the interface to its limits, and some even crash during the test procedure. As a result, any speed ratings we have are strictly provisional, but it doesn't take a minutely accurate test to show up the huge difference between this and older boards.

For example, writing a 6.5Mb file to hard drive using the A4091 takes 14.5 seconds, and a staggering 78 seconds using the A4000's built-in IDE interface. This in itself is a slow result for the A4091, as the limited DiskPerf and DiskSpeed tests carried out indicated a transfer speed well in excess of 8Mb per second.

Drive fragmentation and the vast differences between SCSI-II and IDE put the test in perspective, but A4000 owners should have no doubts that adding SCSI-II is tantamount to boosting the Amiga's base speed.

Access times are similarly blistering, working out at around 4ms, though for some reason the read and directory scan results from our test programs did not accord with the evidence of our own eyes.

Much slower test readings suggest that the software itself is at fault rather than the A4091, so if anyone out there can provide a reliable SCSI-II test program, stick it in the post.



Zorro III required

Hard drive

The bottom line

Implementation 8
Ease of use 8
Value for money 8
Overall 8

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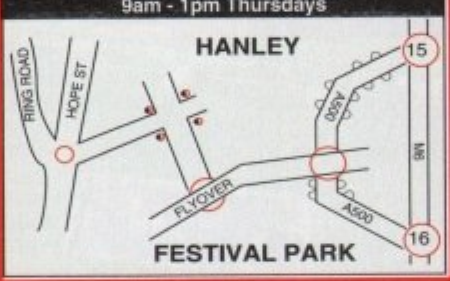
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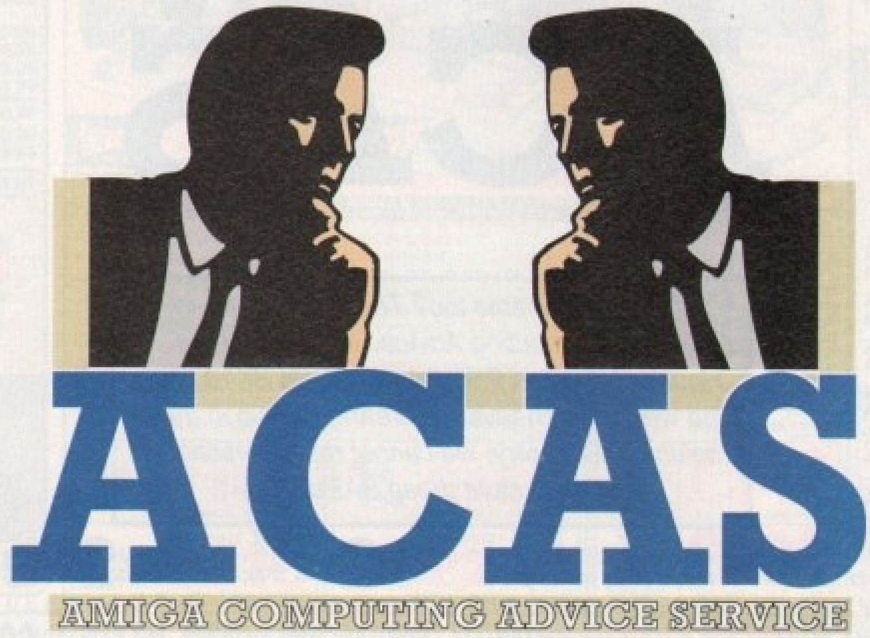
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Confused? Perplexed? Steve White has answers to all your Amiga-related queries from script files to RAM types



Run those scripts

I have finally purchased an IDE 120Mb hard drive for my A1200 and it has just changed my life instantly. Now that everything Workbench 3.0 has to offer is so easily accessible, I am literally devouring the manuals and now feel fairly confident with the Workbench – especially the Shell.

I have challenged myself to write a hard disk install script so that I can easily copy my floppy software onto the hard drive without messing around dragging icons or using the Shell. I've tested the script and everything seems to work fine, only I have to open the Shell and type "execute hdinstall" every time I want to run it.

What I really need is to be able to attach an icon to the script so that it can be run with just the click of a button. Could you please explain if this is possible or not? I understand that IconX has something to do with it. Your help would be much appreciated.

Martin Dean, Hastings

Ah, if only everything was so simple. You're quite right when you mention IconX because it is an integral part of attaching an icon to a script file.

IconX is present in the C directory of your hard drive and basically interprets the script commands much in the way that the Shell does.

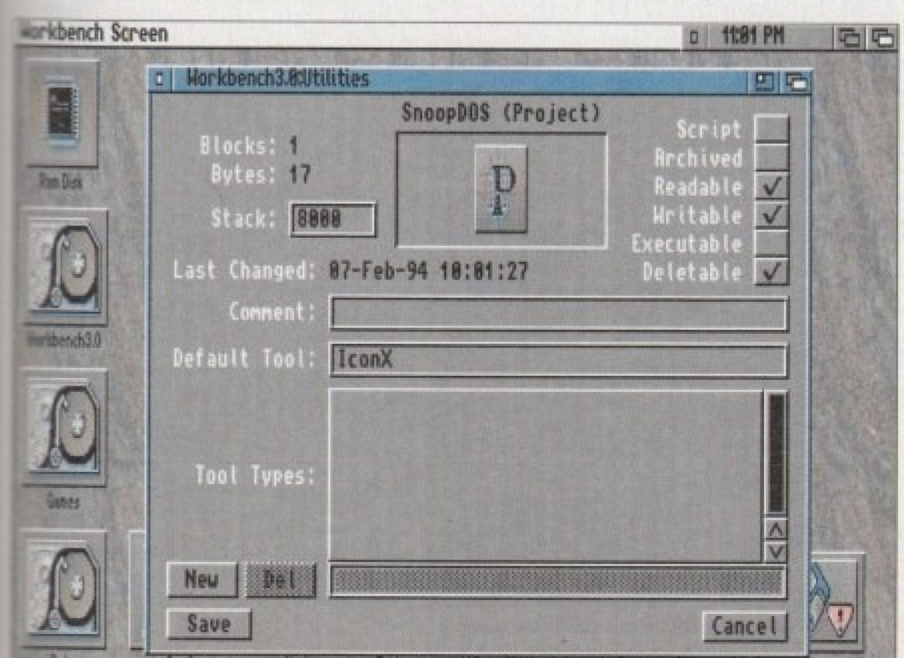
I suppose the first thing to do would be to design an icon for your hard drive installer script. Design the icon using IconEdit in the Tools drawer of your Workbench and make sure the Type menu has Project selected – a script file is described as a Project.

Save the icon in the same location and with the same name as the script file. Locate the icon, click it once and then select Information... from the Icons menu.

A window will appear telling you everything about the script file.

However, trying to run it from the icon will have no effect until you give it a Default Tool. With the Information window back up, click in the Default Tool: window. Type in IconX, hit Return and then click on Save.

Now when you click on the icon you should find that your hard drive installer script has been successfully executed. You could then leave out the icon so that it appears on the main Workbench window. Easy, eh?



Attaching an icon to a script file couldn't be easier provided you use IconX

What a picture

All disks have a disk icon attached to them but is it possible to create one for the RAM disk? I recently designed my own disk icons and cringe when the horrid Commodore effort appears.

I have tried copying a disk icon across but it obviously is lost when I turn the machine off or warm boot.

Simon Johns, Manchester

It is possible to attach a disk icon to the RAM disk but you can't simply copy a disk icon into it. There is a sneakier way which will guarantee your RAM disk boots up with pride.

Design the icon and save it to the S directory as RAMIcon. Next, load up the User-Startup, also in the S directory, using Ed and type in:

```
copy >nil: sys:s/ramicon to ram:disk.info
```

Save the User-Startup and then reboot the Amiga. You should now have a RAM disk icon.

Gag those drives

I am being driven mad! It's not a lack of RAM, it's not a lack of hard drive space, it's not even the lack of hard drive installer programs in computer games. No, this problem is serious – clicky drive syndrome!

Is there any way I can stop my bloody disk drives from constantly clicking all the time? I regularly boot my A590 with blank disks in the drives just so the incessant clicking stops.

The down side of this is that it increases my hard drive access time. I've tried music, meditation, everything, to no avail.

It doesn't matter what the cost, there must be something out there that will turn the clicking off – why does it happen anyway?

Peter Sibbs, Northampton

In my experience, every hard drive owner eventually falls foul of the dreaded clicky drive syndrome as you so perfectly put it, but there is a program out there and the good news is it won't cost you a bean.

The program you're after is available from most reputable public domain houses for just the price of a disk and is called NClick. Unfortunately, I can't remember the programmer's name but it does work and brings sweet relief instantly. It not only disables DF0 but also DF1, DF2 and DF3.

Why fast RAM?

I have read many articles regarding RAM in yours and other Amiga magazines. But I still cannot appreciate the difference between chip and fast RAM. I don't want a thorough breakdown of the thing, just a simple this is why and this is why not.

A friend has told me that adding fast RAM greatly speeds up the Amiga but I imagined this was the job of a processor. Does fast RAM really turbo charge the Amiga?

Jamie Dorne, Isle of Wight

The truthful answer to whether fast RAM actually turbo chargers the Amiga is no! However, that's not to say that there isn't a noticeable difference in speed when it is available.

If you have no fast RAM and you load a program it will dump itself in the chip RAM. This is used by the Amiga's chips to perform calculations and if there are too many programs in chip RAM the Amiga begins to slow as the chips struggle to find space in which to perform their calculations.

When there is fast RAM the programs will use this instead, thus leaving the chip RAM to the chips themselves.

If you are considering using your Amiga seriously I would strongly recommend that you purchase some fast RAM – 2Mb at the minimum with 4Mb recommended.

Arcade thrills!

After selling my Archimedes and saving for what seems like a millennium I have finally bought myself an Amiga computer and I'm very pleased with its performance.

I am very keen to learn how to write computer games and hopefully market them. This was never a reality with the

Archimedes but now I have the Amiga I feel confident that I could write a game of my own.

Could you please explain what the best programming languages are and what software I would need in order to create games?

Lance Richards, London

A *Well Lance, it would seem to me that you haven't really dabbled with computer programming much in the past. Writing games to match those available now would take a great deal of time and patience.*

Games programmers invariably use Assembly language to write their games. As the Amiga is such a complex piece of hardware their are many facets to programming it that must be mastered.

Fortunately, there are a couple of excellent programming packages that would allow you to create very respectable games without a degree in mathematics.

Europress Software are responsible for the world-renowned Amos programming language. It is similar in many respects to Basic, but is far more powerful. But if it is really only games that you want to create you would probably be better off getting hold of Acid Software's superb Blitz Basic 2.

Blitz 2 has been designed with the beginner in mind and offers complex graphics and sound handling which while powerful, won't have you tearing your hair out when it comes to learning the language.

You can contact Europress Software on 0625 859444 and Blitz Basic 2 is available from Meridian at the humble price of £70. The best paint package you probably will have already got with your Amiga – Deluxe Paint. If not, contact Electronic Arts on 0753 549442.



ACAS

AMIGA COMPUTING ADVICE SERVICE

You got problems too? Then drop a line to Amiga Computing Advice Service, Europa House, Adlington Park, Macclesfield SK10 4NP and we'll move heaven and earth to help in these columns. But sorry, we cannot reply personally, so save those SAEs.

Missing printer

Q After saving long and hard my two children purchased an Amiga 1200 which was fine until Christmas.

As a surprise I bought them an Epson LQ100 printer. We spent time reading the manuals and magazines but couldn't get the printer to work. The Workbench 3.0 software was installed and everything went fine until we came to the point of selecting a printer driver from the printer prefs program.

Can you please help? I wrote to Commodore several weeks ago but have had no reply as of yet.

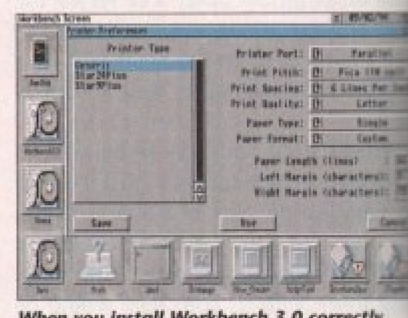
Mrs L Wright, Sheffield

A *When you say you installed Workbench 3.0 I presume that you also own a hard drive. If the software is installed correctly using the official Commodore installer program you should at least have the Generic driver in the Printer Types window.*

I would imagine that either the software has not been correctly installed or that there is some kind of error on your main Workbench disk. Load and open the Workbench disk and take a look in the Printer drawer in Devs.

Inside you should find a printer driver called Generic. Drag it into the Printer drawer found inside the Devs drawer on your hard drive. When you next load up the printer prefs Generic should be available in the Printer Types window.

If you can't find the Generic driver I suggest you get yourself a replacement set of Workbench disks. Explain to the dealer from who you bought the computer about the problem and see if you can have a new set of disks. If this doesn't work you will have to call Commodore.



When you install Workbench 3.0 correctly you should have the Generic printer driver available to you. Check the printer prefs

Shell short-cuts

Q After tampering with the Shell and finally getting to grips with it I would like to add some hot key definitions so that I can speed up my typing of commands.

At present I am personalising my Workbench and have installed the excellent MagicWB PD program. Now all that is left is to personalise the Shell. I understand that creating hot keys is possible in the Amiga but I can't fathom out exactly how it is done.

David Holden, Southampton

A ***Danger! MagicWB may look very attractive but we installed it on the Amigas here at Amiga Computing and it caused quite a few problems. My advice would be to delete it immediately and personalise the icons yourself – a far more satisfying and safe option – rather than risking your Amiga's health.***

Anyway, on to your point about personalising your Shell. When you load the Shell up it reads a file in your S directory called Shell-Startup. This text file contains information about hot keys, called Alias in Amiga DOS, and various other attributes of the Shell window. Take a look at by typing:

```
ed s:shell-startup'
```

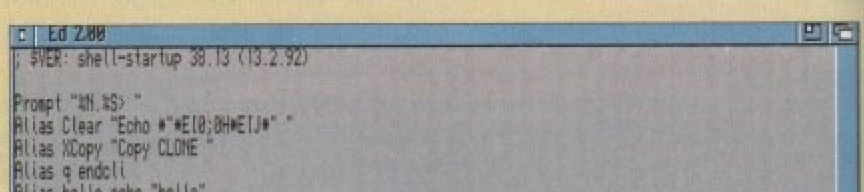
from the Shell itself.

Let's say that you wanted the Shell to print "hello" when you typed "hello". You would need to type in:

```
'alias hello echo "hello"
```

and then save it by pressing Esc then x and then Return. All you need to do is attach a command to the alias.

The next time you load up the Shell, type in "hello" and see what happens. The Alias command is more powerful than explained here but this should keep you going for the moment.



Instead of typing in long-winded Shell commands, why not create yourself some aliases to make life a little easier?

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G043	Learn and Play 1	Good for the kids. Blackboard maths. etc.
G044	Learn & Play 2	More fun for the kids
G047	Lettrix (N)	Tetris game involving letters
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G065	Pixie Kingdom (2 disks)	Tricky adventure game. Good
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G245	Iron Clads (2 disks)	Graphic adventure
G247	Quiz Master	Quiz which includes Editor
G248	Assassins 40 (N)	10 Puzzle Games
G249	Assassins 41 (N)	includes 3 Games
G250	Atlantis	Excellent Adventure Games
G252	Bombjacky	Rescue the dying planet
G255	Amos Games	5 Games including Glassback
G256	Slamball	Management game of US football.Type Sport
G257	Relayer	Shareware game. Brand New!
G299	Top Of The League	Addictive football management game
G300	Blob	Shoot 'em up
G301	Sector 1	Excellent game
G302	Micro Market	Stock exchange game
G303	Strike Ball	Amos written baseball type game
G306	The Funhouse	3 games including Enigma
G307	18th Hole (2 disks)	Excellent golfing game
G308	Gush	Very similar to pipeline
G310	Zalycon (2 disks)	Space shoot'em up
G312	Rasta Bike	Backgammon & Dungeon flipper
G316	Blood Runner, Monaco	Patience card game
G319	Mega Race And Wacky Rabbit	Compilation
G324	Psycho Santa	Waggle your joystick with this festive disk
G325	Mister Men Olympics (2 disks)	Excellent game for disks as reviewed in Amiga Computing
G326	Wibble World Giddy	Really good platform game
G327	Tetris Pro	Tetris game with exceptional variants
G328	Calculus Combat	V. Good missile command type game
G330	Friday 13th	Pretty Gruesome Platform Game
G331	Jigsaw (2 disks)	Puzzle Game
G332	Dithell in Space	Cutesy little space demo game

A1200 ONLY

U235	Sleepless Nights	Compilation of A1200 utilities
D285	Fairlight	29 meg of graphics on one disk
D286	No point of sale	Stinning French demo
D288	Revelations	Photo realistic slideshow
D289	State Of Art	Famous quality demo
D290	Raving Mad Me	High quality music video
D291	Lethal Exit	Stunning demo
D310	Nigel Mansell	AGA slide show
G321	AGA Klondike (3 disks)	Excellent patience card game
G322	Giger Tetris	Tetris clone
G323	U Chess	Brilliant chess game
D301	Retina	Excellent Vector film demo
D300	Technotrack II	More rave music
D294	AGA Swimsuits (5 disks)	IFF 256 colour pictures use with DPaint etc

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THE Devil's advocate

An ugly duckling?



The Commodore CD32 comes under close scrutiny in the first of many inquisitions into the kind of treatment you, the customer, receive. Adam Phillips asks the questions

Much of what goes on the computer industry warrants a closer look – dissatisfied customers, promises made and not kept, fickle attitudes towards social issues and many other areas are ripe for investigation.

Each month, we'll be bringing you concise interviews with the wheelers and dealers of the industry for you to make up your own mind on how you, as a customer, are being treated.

The series kicks off with David Pleasance, MD of Commodore (UK), speaking about why their new wunderkind is not receiving the good response they expected from some of our readers.

David, what can you say to the buyers of the CD32 who feel let down and disappointed with the lack of original software that was promised to them by the end of 93? Straight port-overs from A500 games with extra sound and colours are hardly state-of-the-art 32 bit CD technology gaming we were led to expect soon after the launch...

That's a fairly simple question to answer – to manufacture and produce a standard entertainment product, by that I mean a floppy disk or cartridge-based product, takes approximately nine months.

To produce a CD-based product using all the technology and facilities that are available on highly-specified CD-based machines takes about 18 months. The product was only released to two [companies] because we had a very strong requirement to keep the big secret.

The product was given to a handful of developers three to four months prior to its launch so the realities of it are that there are a large number of very good products under development but the timescale limit takes longer than the machine's been on the market. So, in essence, the answer is "be patient".

How do you feel about the software houses that made promises and subsequently missed their deadlines? Do you, like the consumer, feel let down?

Yes, there are certainly a number of publishing companies who made commitments to us verbally that they were working on various projects and I think in all honesty that Commodore's financial position left these people a little bit scared. So, while they were telling us on the one hand that they were doing things, they put themselves on hold to see what was going to happen to Commodore before they committed their resources.

I can't really blame them but at the end of the day, I'm obviously not happy that we were given lots of commitments which were not fulfilled. I can honestly say now that I don't know of any company that's in that position now – they're putting their resources into it.

In fact, the levels of sales at first, even for standard ports as you rightly call them, have been quite staggering so far as I'm aware. I don't know of any major company that is not committed to producing on its own...

While your recent double page spreads quoting leading games makers confirming their continuing support is encouraging, when are we actually going to see CD32-specific games other than *Liberation*?

Microcosm is due out at any time and that is pretty damn good. *Rise of the Robots* is due out, they're telling me, at the beginning of March and that's fantastic.

So, it's very imminent – I mean, we're in early February now but my belief is the best titles will come out probably in the pre-Christmas period this year because there really is 12 months' development in these products and they can't be done any faster... so much to use, you know.

Industry sources have suggested that there are maybe as little as 50,000 CD32 units in British homes at present. Is this figure worrying for the future of the CD32 and therefore for Commodore as a whole?

We have not achieved the level of sales that we would've liked and I think that there are a number of reasons for that. Certainly, the lack of software of any description was a definite negative in terms of people committing to buy the machine and I can't blame them for that.

Also, the reality of it is that the console market is considerably down on... everybody's estimates. I would suggest to you that ➤



Sega and Nintendo are at least 40 per cent down on their estimates. We believe that we still have made the lion's share of CD-based hardware sales but obviously, the numbers are down on what we predicted.

However, what I can say confidently is that there is no question in my mind, and I've been at Commodore for ten years, that in the [time] the CD32 has been released, we have had a better sales penetration than any other previous product, including the Commodore 64 and the Amiga 500.

I think it bodes very well – my belief is that the CD32 will most definitely be the product for this Christmas, 1994.

To truly make the CD32 a success, America is the market to be conquered. Apparently, the release Stateside was a low profile affair which again leads to the question – are Commodore doing enough?

Well, it's no secret that Commodore don't have huge resources at this moment in history. The press launch in the States during the CES show was extremely well attended with over 200 journalists and extremely well received – and I'm not just saying that because I like making all positive notes, I'm absolutely genuine about that.

I've been very critical about what the Stateside people have done in the past but this particular launch went very well and I think the reason why it went down so well is because there is such a down feeling and an anticlimax regarding 3DO – everybody though it was going to be wonderful.

The 3DO shipment figures I've been told are 32,000 units shipped to retailers and less than 10,000 have sold through since September. The American journalists are very disappointed and believe the 3DO is a disaster and are really looking for something to fill its void.

With the launch, we've shown what the CD32 can do and what the potential is. They are very excited about it and I think you'll find that we will have had within the last week or two and the next two to three weeks, a great deal of coverage.

The product isn't shipping until March – we are not in a position to do a massive campaign. I mean it costs millions and millions of dollars to do that but our plan is to launch in a very similar way to that which Atari have done with the Jaguar; to launch in a couple of specific areas and promote within those areas, and I think that the potential is very large.

We actually genuinely believe that we can do somewhere between 200 and 300,000 units in a 12-month period from the date of launch in the States.

In the future, how do you reckon your chances are against the 3DO, Jaguar, Saturn and other high-spec machines that are coming to our shores at some stage this year?

I think we have a big advantage in terms of 3DO, Saturn and the Nintendo alliance, and that is we have a product that already exists. You know, when Saturn hits the States or Europe, it's going to be much later this year if it hits this year at all; I suspect it will.

They are going through the same problems that we are going through in terms of product written for it so I believe that we have a headstart – we launched in October... to hit the shelves first.

My belief is that having this year headstart is definitely going to be advantageous to us – there is nothing that the Saturn product spec delivers that is exceptional in regard to our specification.

Jaguar in terms of its specification is somewhat of a scam – it's not a 64-bit product as everyone who looks at it realises. I'm not so sure about the end user, but it's not a 64-bit product.

The other thing about the Jaguar is that obviously at the moment it's a cartridge-based system and the CD doesn't exist for it.

My information is, and I don't think that you'll disagree, that the majority of software publishers are desperately trying to get out of cartridge manufacturing... they're not really keen to commit writing for it and at the end of the day, we all know it's the software that drives the hardware.



> *"The Jaguar, in terms of its specification, is somewhat of a scam – it's not a 64-bit product..."*
> – David Pleasance

Having said all of those things of course, we have a number of products under development which I can absolutely assure you will compete in terms of specification with any product that we know of or can potentially be promoted.

Listen, I'll give you a very good example, this project from Nintendo with Silicon Graphics. They were showing what the potential will be at the CES show in Las Vegas straight from a $40,000 machine with these fantastic graphics, but they were showing them on a monitor that cost $5,000.

There's no way on God's earth that a kid at home is going to see that on a in his home without paying $5,000 for the monitor to give that resolution. To me, I think that's a scam, never mind what anyone thinks.

So in terms of our technical specification, the projects we have under development can certainly keep ahead of our competition.

The CD32 Mk II is in development at present. Can you tell me about the technological advancements from the present model and when it is going to be released?

I can't and I won't because the worst thing in the world is publishing vapourware which stops people buying my product and I can't afford that – I have to have people continually buying my product. So, I won't comment on that.

Should customers be concerned that their recent purchase could become obsolete by the end of the year?

No it'll never become obsolete, absolutely no way at all. The one message that we have to get through is that technology cannot stay still.

For our readers, do you have any promises you would like to make concerning the future of the CD32 and the Amiga range?

Concerning the CD32, there are a number of very high profile arcade companies currently committed to writing for the machine.

Finally, is it true that you once came second in an *Opportunity Knocks*-style show in Australia for playing the flamenco guitar?

[Short laugh] Yeah, I actually did in a national contest, yeah... many years ago.

Thank you for your time.

● *If you have any opinions, views or other information on what you have read and would like to see covered, then please drop us a line at The Devil's Advocate at the usual address, the intention being to print your replies. We look forward to hearing from you...*

AC

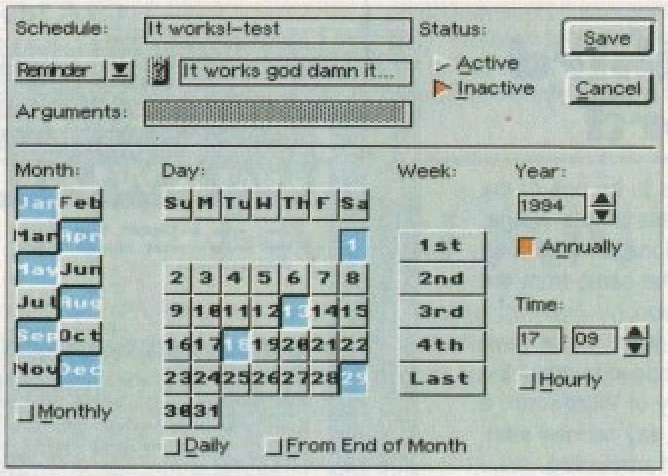
Thanks to the ever growing number of hard disk users, the back-up business has become one of the major growth areas when it comes to serious software. As a result, Central Coast Software have enjoyed something of a boom period.

However, improved sales have a tendency to attract the opposition, which in the case of software security has meant a much improved revision to the Ami-Back range of back-up and utility programs.

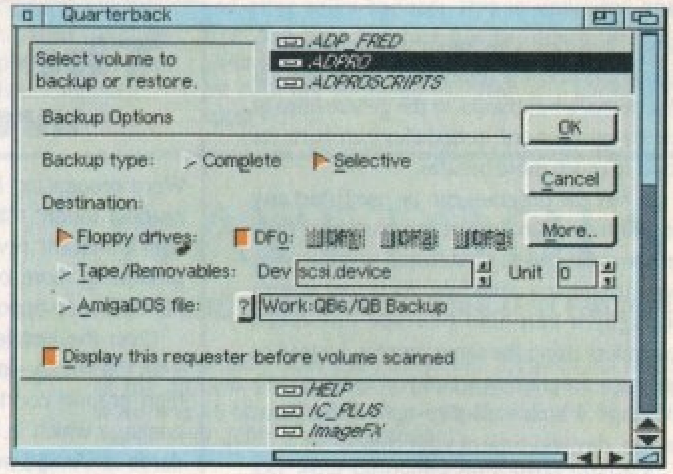
Both Quarterback and Ami-back have a very similar approach to the subject with a dedicated back-up package in the form of Quarterback and Ami-back alongside separate disk management packages entitled Quarterback tools and Ami-back tools respectively.

However after years as the dominant force in disk management, Central Coast have recently found themselves playing catch-up as Ami-back launched their latest update with the addition of back-up scheduling – something which the new Quarterback couldn't match.

This unpleasant surprise obviously infuriated the boys and girls at Central Coast, especially considering they had only just launched their latest version of Quarterback.



Set up a reminder and launch some software whenever you want



Listing assigns and selective back-ups are all a part of the new package

As a consequence they've now retaliated with the release of Quarterback v6 only months after its predecessor. However, this time scheduling is high on the agenda with a standalone utility appended to the basic Quarterback package.

To be fair the authors have taken the opportunity to do a little tidying-up as well as adding the aforementioned scheduler. At the forefront of the new enhancements comes much improved data compression which can write to floppies at normal speed. Support for multiple tape back-ups has also been included, allowing large volumes to be spread across several small tapes. Tape support has also been improved to cater for more modern tape streamers which offer hardware compression, fast tape advance and quick eraser features.

On top of that come several new ARexx macro commands – some of which have been designed specifically for the scheduler, while many of the existing macros have been updated and expanded to further improve Quarterback's automated operations. However useful, much of the above is basically icing, while the real appeal has to be the program's impressive ➤

Words, pictures and disk back-ups

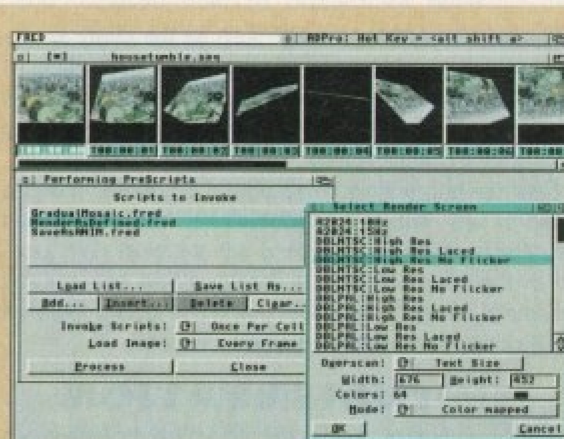
Paul Austin peruses the ultimate in Amiga updates including the all-new ADPro2.5, Wordworth 3 and the latest revision of Quarterback

ADPro upgrade

In what the company terms "the most significant upgrade in its history", ASDG's Art Department Professional – alias ADPro – now offers much improved display board support, over 100 pre-written ARexx programs, direct support for the Fargo Primera dye sublimation printer, new file formats and operators, plus an entirely new look for the interface itself.

The program also offers a choice of several completely style guide-compliant user interfaces. According to company president Mr Perry Kivolowitz: "A new and thoroughly modern user interface was our most requested improvement. We surveyed our customers and found that some preferred a list-oriented graphical user interface – GUI – for speed, while others preferred a button oriented GUI for ease-of-use. We implemented both and allowed them to be intermixed configurably."

ADPro's GUI now runs on many third-party display boards, such as the Picasso, using RTG – ReTargetable Graphics – technology. ADPro can now render images in a window on the same screen as its user interface, bringing new levels of wysiwyg performance to the product. Other newly supported third-party hardware includes DPS PAR, EGS, Retina Z-III and Retina, and the Video Toaster.



Improved automation courtesy of the all-new FRED

Image format support has been improved with the addition of six new file formats in ADPro and three in the optional Professional Conversion Pack.

In the case of ADPro, support has been added for Commodore's CDXL animation format, Digital Broadcaster JStream files, FLC and FLI animations, ICO files and direct reading and writing of Workbench icons.

The PCP has grown to support files in the SGI, Alias, and Wavefront, both the RLA and RLB formats. Owners of the PCP should note that, as in the past, their PCP modules will be upgraded as part of the ADPro upgrade.

SUBLIMATION

ADPro 2.5 directly supports the Fargo Primera printer in its dye sublimation mode – its thermal transfer mode was already supported by ADPro's PrefPrinter saver. "The Primera is a breakthrough due to its low price," said Sales Manager Gina Cerniglia.

"We've adapted our state-of-the-art printer support to drive the Primera in dye-sub' mode, including the ability to print huge posters in amazing colour."

The new package also includes more than 100 pre-written ARexx programs, many of which are interactively customisable by the user. Used in conjunction with the latest version of FRED, these ARexx programs can be combined ➤

new scheduler. Obviously the scheduler's primary concern is unattended back-ups via Quarterback but thanks to the generosities of the programmers, scheduler can turn its hand to much more besides.

In fact the program can be used start any program or ARexx script at a particular time or according to a predefined regular – or even irregular – schedule. As if that wasn't enough, it can also provide on-screen reminders using the same process. Instead of adding a program or script you can type in a message which will pop-up on the year, month, day and time of your choice.

Actually setting up scheduler with any one of the aforementioned events is simplicity itself – you simply boot the program, add a new event, define the start time and whether it should be yearly, monthly, or daily. Basically any perceivably combination of time and date is possible on either a repetitive or single-event basis.

NEW EVENT

In order to activate the process you simply add the new event – with an appropriate title – and save it out. Basically that's it. Assuming you do the sensible thing and add the program to your Workbench-startup drawer – with the appropriate tool types – it will boot-up every time you start the machine, depositing an AppIcon on the Workbench ready to receive new events and activate existing ones.

Essentially that's about it. Not exactly a major revision but for any registered users out their it's definitely worth the extra investment. And for any would-be new investors the latest revisions certainly go a long way to reaffirming Quarterback's position as the leading light in software security.

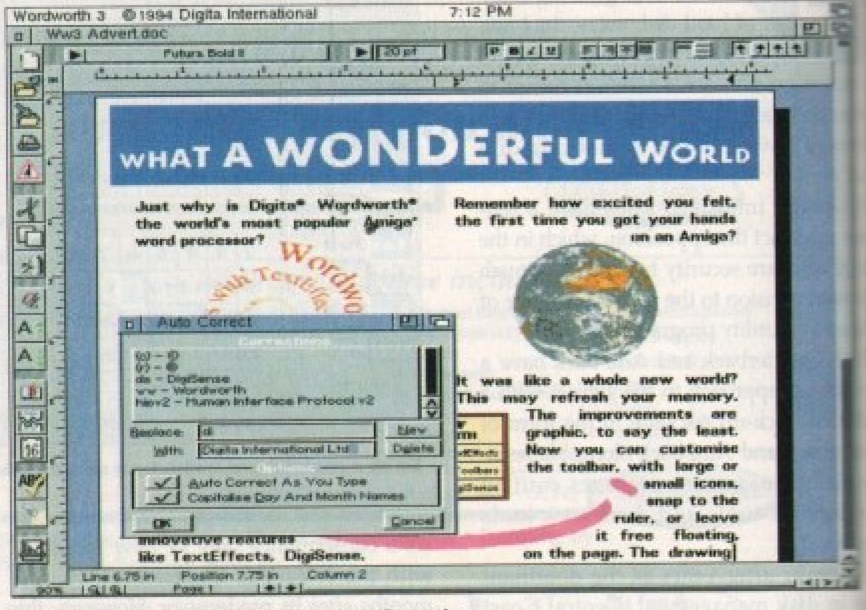
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The third word

Word processing has to be one of the hardest fought markets on the Amiga, with constant revisions and updates prompting more of the same from the hard pressed opposition.

Over the last few years Digita have – on the whole – managed to retain the high ground courtesy of Wordworth, a package which in its day set new standards for Amiga word processing.

However in recent months the tide has turned with the arrival of Final Writer, a package which made a very serious challenge for the title of the Amiga's premier word processor. As a result Digita have now bounced back with the third revision of Wordworth.

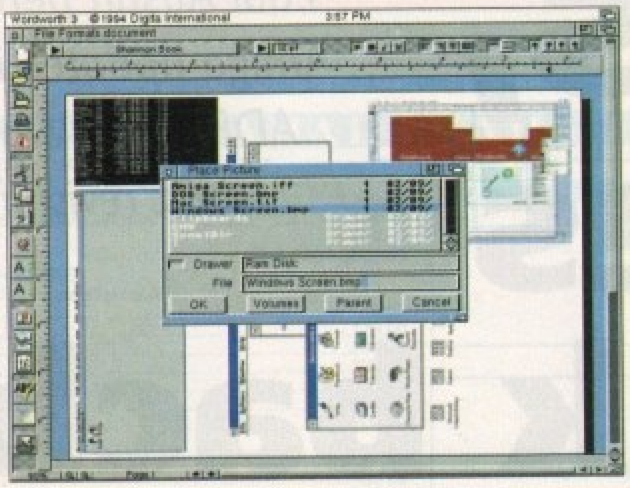


Eradicate all silly mistakes thanks to Auto Correction

Obviously Digita had to pull something special out of the bag, and with the arrival of Auto Correct they could have done exactly that. Thanks to this new feature, minor typing errors are automatically corrected for you without the assistance of the usual spell check.

For example if you inadvertently typed "teh" instead of "the", the error would be automatically spotted and replaced with the correct spelling as soon as you hit the spacebar. Better still, the process is completely configurable, so you're free to add your own definitions to the list. For example by simply adding the letters *AC* and the appropriate definition the software would replace it with *Amiga Computing* every time that letter combination appeared.

Customising in general has seen a lot of attention with another example being the arrival of new user-definable interface which enables you to specify the typeface, the gadget sizes and group titles. It's even possible to edit the pop-up requesters if required.



Picture placement and printing have all been improved in version 3

For pro users special attention has been given to file sharing between Macintosh, Microsoft Windows and DOS-based applications. Hard copy presentation has also been enhanced via the Digita Print Manager which now ships with Wordworth-specific replacement printer drivers for the HP Deskjet and HP Laserjet range, as well as Canon's BJ printers.

To get the best from the new drivers, Digita have included the reference library of Agfa Compugraphic fonts, which formerly sold separately for £69.95, and which provides a selection of 50 fonts – all of which are now offered as a freebie bonus with the new Wordworth.

For any new investors, Wordworth3 will set you back a penny under £150, while upgraders can cash in on the new software for just £49.99.

However if you've got any other word processor and fancy a trade-in Digita will take your old package plus £59.99 in exchange for their latest creation.

For more information contact Digita International on 0395 270273.



On-creen previews bring a much improved level of intuition

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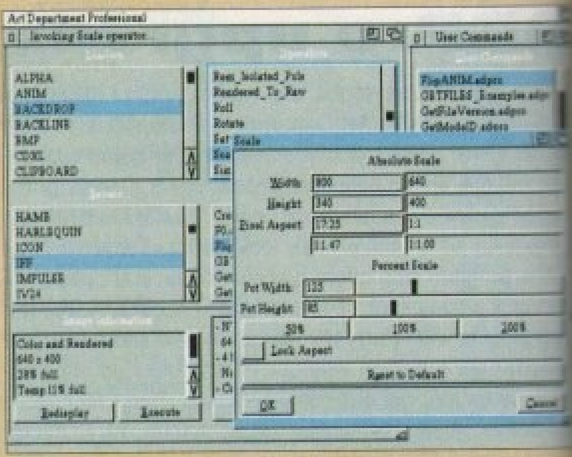
In addition, ADPro now allows users to define their own ARexx programs which can be incorporated directly into ADPro's configurable user interface. Other improvements and additions have been made such as the ability to perform alpha channel blending with most file formats, not just those that support their own alpha channel. Composites can now be performed over a range of colours permitting more flexible chroma keying.

New operators include Histogram Equalization and a brush-based Pattern operator. A new program called CineMorph – not to be confused with the older GVP product of the same name – is included and can convert streams of images between 24 frame per second film-style and 60 field per second video-style timebases.

DOCUMENTATION

The program also benefits from improved documentation in the form of a new manual that includes nine tutorials, many more pictures and diagrams, and a much improved ARexx programming section. The manual has also been reorganised – and its index expanded.

ADPro 2.5's price will remain unchanged at $299, but existing owners can upgrade for $45 plus shipping and can, for the first time, upgrade via telephone using Visa, MasterCard, or American Express. For more information, contact Ms Gina Cerniglia at ASDG Incorporated, 92 Stewart Street, Madison WI 53713 or call 0101 608 27 6585. To upgrade direct contact ASDG on: 0101 608 27 9240.



It's been a long time coming, but ADPro has at last given up the lo-res look

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PICASSO II

Retargetable Graphics (RTG) is the future of Amiga graphics display technology. True RTG means that a graphics device will not be restricted by the memory limitations of the host system's Chip memory, or by the speed of the custom chips. A true RTG device does not have to use Chip RAM at all, and can run exclusively in Fast RAM if needed for the best possible performance whilst allowing any well behaved software to utilise the enhanced resolutions and colour modes of the RTG device without any modification to the software. Well behaved software will be able to run on their own high resolution custom screens and will not have to rely on running on either the Workbench screen, or screen promotion hacks, to allow compatibility.

The Picasso II RTG Emulator integrates seamlessly into the Amiga operating system to give the most reliable emulation available. The new resolutions provided by the Picasso II appear in all your applications as new screen modes selectable from the standard ScreenMode requester. For any program that allows you to choose a new screen mode, you would simply choose a Picasso II screen mode as an alternative (such as Picasso:1280 x 1024). You will not have to wait for any custom programmed versions of any program that is compliant with the rules of the operating software. Such programs will be able to immediately take advantage of the Picasso II board. Programs that are written with AGA in mind will be able to immediately take advantage of the new modes available to the system.



The Picasso II is designed to take full advantage of the host computer system. The built in Blitter and high speed memory subsystem mean that you will have super fast screen updates. Switching between Picasso II mode screens is very fast and switching between Picasso II mode screens and native Amiga screens is nearly instantaneous (as fast as your monitor can re-sync). Because the Picasso II RTG board does not use Chip RAM, your Amiga will be less likely to suffer from bus contention problems normally associated with running high resolution screens and heavy DMA activity.

The Picasso II RTG emulator has been designed so that it uses no Chip RAM. All available screen modes on the Picasso II use only Fast RAM. This sophisticated design means that even a 1Mb Picasso II board can support as many high resolution 256 colour screens as will fit in the Fast RAM of your system.

The Picasso II comes with several screen modes and resolutions that are industry standard and for which all monitors are designed. These modes operate at the proper scan rates and frequencies in order to take advantage of the most popular monitors available. In some instances, where those modes may not be sufficient, you can now create your own custom screen modes with PicassoMode. You will be able to create screen modes that exactly match your monitors frequencies and resolution capabilities.Picasso II comes with MainActor (animation program), IFF, GIF, JPEG and MPEG Viewers and drivers for ADPro, ImageFX, ImageMaster and Real3D. A TVPaint 2.0 bundle is available too.

Great New Prices - TVPaint Junior Included!

PICASSO II 1 MB + TV PAINT Jnr.	£319.95
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EMPLANT

EMPLANT will revolutionise the way you use your Amiga! Imagine one card offering multiple emulations that ALL multi-task (after all, isn't that the way the Amiga was meant to work!)

The supplied Mac emulation boasts *full colour* (16 ECS, 256 AGA, 1.6 Million with supported graphics cards) and superb Stereo Sound.



EMPLANT supports Hard Drives, (via on-board SCSI or AmigaDOS partitions), Hard Files, MAC 800K (via Mac drive adapter), MAC/IBM 1.44Mb, IBM 720K, EMPLANT and AMAX formats. The SCSI interface supports both Amiga peripherals and the peripherals of the emulated system at transfer rates of over 1 Mb/Sec.

EMPLANT supports AppleTalk, Serial ports, Printers, Modems, Midi, etc. You may use SyQuest, Any AmigaDOS device (DH0:, RAD:, VD0: etc.), Scanners, Graphics Tablets, CD ROM etc.

Emulation speed is exceptional and compatibility is excellent. All known software runs! Built in file transfer between platforms is provided, with new MultiOS system and support for the Amiga Parallel port for direct printing via Amiga drivers!!

The IBM 386/486 emulation is imminent, with Atari 800/ST/Falcon, C64/128, SNES/SEGA, Apple II (among others) all planned in the future. These will be available as low cost upgrade modules.

EMPLANT currently supports any Zorro equipped Amiga with the A1200 PCMCIA version out soon.The Mac emulation alone requires 68020/30/40 with 4Mb RAM minimum and also 256K MacII/x/cx/SE30 ROMs.

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WaveTools hardware and software gives your Amiga the punchy sound quality of CD's and DAT recorders at a fraction of the price of other 16 bit sound cards. WaveTools uses your computers hard disk drive to directly record, edit, mix and playback audio with the clarity and crispness that only 16 bit technology can provide, in Amiga compatible AIFF 16 stereo file format. Using state of the art circuitry and the latest in 64X oversampled Sigma-Delta conversion technology. WaveTools has a frequency response of 10Hz to 20KHz and a dynamic range of 85dB for faithful reproduction of sounds from the fattest bass to the thinnest strings. WaveTools provides a pair of stereo I/O jacks for direct connection to any device with standard line in and line out connectors. Record from CD players, DAT recorders, Video Tape, Videodisk or any other line level audio sources.

WaveTools is able to sample data at a variety of sampling rates as low as 19KHz as well as the standard rates of 44.1KHz and 46KHz for CD and DAT compatibility. WaveTools includes a waveform editor for cut, copy, paste and mix operations on selected portions of audio waveforms. Edits can be tagged as destructive or non-destructive. WaveTools also maintains an internal time code in the format of SMPTE 24, 25 and 30 frames per second to ensure perfect synchronisation of your audio files with video and animation, if required.

The ***WAVETOOLS RTX*** *(Real Time Effects)* Module adds an AD2105 DSP (Digital Signal Processor) and a SMPTE time code reader/generator. The DSP allows real time 8 track mixing and playback (stereo out), and realtime effects such as flange, echo, slapback, EQ etc. The architecture is open to allow third party developer support (custom DSP routines). The SMPTE time code reader allows WaveTools to chase Longitudinal Time Code (LTC). Vertical interval Time Code (VITC) and Midi Time Code (MTC). It accepts composite NTSC or PAL video for VITC and line level audio for LTC. The time code generator can stripe VITC or LTC and can generate a user positioned time code burn-in window for making a video work print with time code stamped on it.

WAVETOOLS	£349.95
RTX Module (Ships February)	£299.95
WAVETOOLS RTX (both boards)	£599.95

UPPER DISK TOOLS

This amazing new program offers a great new concept in the recovery of deleted or lost files from either corrupt or normal disks. Files are recovered from disk through a new virtual AmigaDOS device called REC: that is mounted by recovery. Each scannable disk drive has a directory within the REC: device with the same name. These can be floppies or hard drive partitions, including those formatted with the newer file systems Directory Cached or International.

Once the user scans any of these directories, the program analyses the respective AmigaDOS disk drive and builds that disks directory tree. The files found during the scanning process are placed in directories according to their category, either normal deleted files, deleted files without parent directories or files without headers.

The brilliance of this concept is that users can retrieve the files with a simple copy procedure from the REC: device to anywhere else, using the CLI, Workbench or their favourite directory utility program!

Everything is so transparent that it is even possible to read or execute a file from the REC: device!

UPPER DISK TOOLS is supplied with a full user manual and is an absolute dream to use.

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A bug in the

It's quite amazing to see how much the computer industry has evolved since the very early days of the Sinclair Spectrum and Commodore 64. How times have changed since those exciting days when quality was all-important and the sales of games meant little against the entertainment value they offered.

Nowadays the purchaser matters little, entertainment matters less and the incredibly wealthy software industry runs with a narrow criteria based on money and self-promotion, and all at the expense of what used to be the singularly most important element in the industry – the games player.

As Amiga owners you may think that you have been well supported by the software publishers, venting your anger and frustrations at Commodore's often perplexing marketing strategy – but you'd be wrong.

Commodore have made mistakes, but theirs are a far cry from the often cut-throat, uncaring attitudes that exist within the software industry. What I am about to say is not intended to shock, but to inform the reader of the unprofessional attitudes that often exist behind the glossy exterior that is the software publisher.

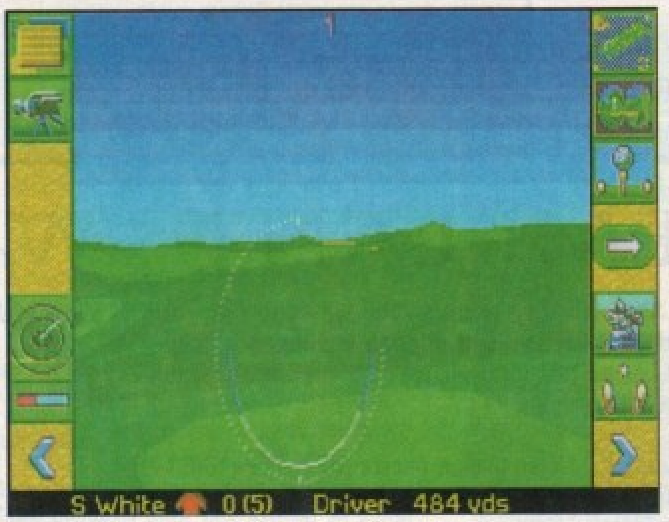
As the popularity of the Amiga home computer grew, so did the software industry as a whole. What were once family businesses very rapidly evolved into corporate giants and with this evolution came the inevitable distance between publisher and purchaser.

The once all-important guy at the end of the line had now been forgotten amid contracts worth millions and an industry which often no longer cared about quality, sacrificing it for quantity.

Of all the various tribes of home computer and console owners, it is the Amiga fraternity who have suffered the most. The biggest bone of contention between Amiga owners and software publishers is piracy – something most people know exists but know little about.

As far as software publishers are concerned, piracy is to blame for every shortfall with Amiga software – poor packaging, bugs, lack of after-sales support and non-hard disk installable software are all cited.

And now piracy has become the excuse used by software publishers to avoid what is considered hassle from purchasers – the same purchasers who were and still are responsible for the growth of the computer industry, especially Amiga owners!



First sight of an FPU and the golfer in MicroProse Golf does a runner. And where are those data disks?


Tornado from DI is probably the most accurate and bug-tested Amiga game for a long time. Any bugs will be rectified with the release of the new master disks

Only by uncovering the many ways in which Amiga owners have been short-changed can we gain a good impression of the real truth behind the threat of piracy.

Probably one of the most successful companies who have declined to properly support Amiga owners in the past are Ocean Software. Famous for their unimaginative and uninspiring movie licences which have sold millions to the younger age group arguably due to their titles and subject matters, Ocean's F-29 Retaliator and Epic are two of the most bugged games around – and this from one of the biggest software publishers in the world!

HELD BACK

And when MirrorSoft were in business a few years back, they deliberately held back their Turtles game from computer magazines because they knew full well it would be slated.

It is this kind of skulduggery that has helped shape the software industry we know today. But the problems don't end when a game has been purchased.

Bugged software rarely causes an uproar – partly due to the appeasing nature of the British public – but it is becoming more and more common.

It is true to say that nearly all software houses have some kind of bug-testing team and to all intents and purposes they do their best to ensure that software hits the shelves "bug free". Unfortunately due to self-imposed deadlines, and sales and marketing teams who care little for quality, the quantity of software that is actually released bugged is phenomenal.

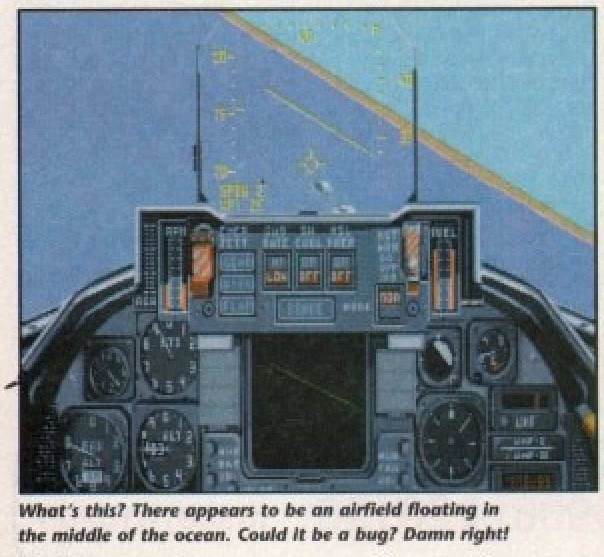
The sales and marketing team will invariably admit the existence of these bugs in their products, although they will skate over the problem whenever they can, putting it down to (self-imposed) deadlines and the fact that you can never totally free a game from bugs.

OK, that's a fairly valid point, but where are the numerous bug patches that grace the PC? A tremendous number of bug patches are available for this machine on bulletin boards, in the public domain and from the actual companies concerned.

> *I was disgusted with the contemptuous attitude of some publishers towards their buyers*

In all my time in the computer entertain-ment industry I have never seen a patch for the Amiga– if there are any they must be few and far between!

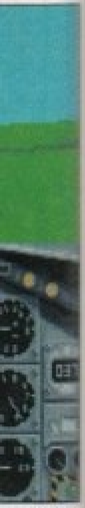
MicroProse have had problems wit

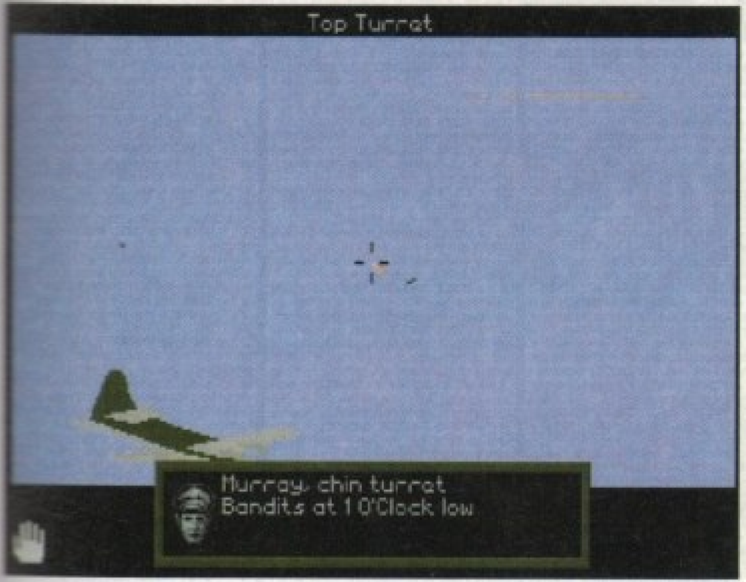

What's this? There appears to be an airfield floating in the middle of the ocean. Could it be a bug? Damn right!


Four disks of torturous pain thanks to the neglect of a hard drive install option. Cheers, Virgin



Aeroplanes that turn on a sixpence and bugs galore in Virgin's Reach for the Skies. You can even play an RAF and Luftwaffe pilot at the same time!





It may look like a string of bullets but it is in fact a bug. If this appears you're in trouble because the game freezes soon after

Is your home computer being pushed out into the cold by decaying standards? Steve White investigates the decline in software quality

system

bugs. B17 Flying Fortress, for example, does not run correctly on either the A600 or A1200, nor does it fully utilise the enhanced performance of what are considered default accelerator cards.

Knights of the Sky suffers from a random bug that causes the screen to update approximately one frame for every one second real-time, and just at the crucial moments in the game.

If you play MicroProse Golf with an FPU (floating point unit) or certain fast RAM expansions in your Amiga, the golfer sprite flashes on and off.

ATTITUDE

Indeed, I was personally so disgusted with the contemptuous attitude of some software publishers towards their loyal buyers that I decided to help Rowan Software de-bug their Reach for the Skies game for Virgin.

On average, I reported twice the number of bugs that Virgin's team spotted. After my second report I did not receive later versions and subsequently the game was released – bugs included, some of which I had even informed them about. There you go, a prime example of the ignorance of software houses.

Combat Air Patrol (CAP) from Liverpool-based Psygnosis was indeed bugged, again at the most crucial moments in the game. Just who is testing this software? When I challenged Psygnosis about the problem they didn't appear particularly concerned and nothing more was said.

There are others that I could mention and they know who they are. If Digital Integration can produce excellent and complete games why can't other software companies? Digital Integration, famous for their flight simulations, have released only two within the last three years – F16 Combat Pilot and Tornado.

Both are exceptional games that look good and play well and which have sold deservedly well – you need only read the manuals to realise that you're dealing with a company who care about their user base.

Digital Integration have also announced that they are planning to release an enhanced version of Tornado, all previous bugs removed. This is certainly a first, and congratulations must go out to DI for taking the initiative.

If software publishers refuse to release bug patches there is an alternative – an independent committee employing a specialised team of testers set up especially to monitor software and help the software publishers to clean up their products.

Anyone who ignores the advice of the committee would have a sticker slapped on their software informing the public that it has not been properly tested and that it may contain errors.

Retailers would undoubtedly refuse to take unchecked software which would force software publishers to spend more time making sure their products were working correctly.

Unfortunately, it is not just bugged software that causes problems. Ocean recently released their movie conversion of Steven Spielberg's Jurassic Park on the A1200 and although the program came on four disks it was not hard disk installable (something they have rectified with the release of Ryder Cup).

ABYSMAL

The loading time is abysmal from floppy and you spend more time waiting for game sections to load than playing the bloody thing – as far as hard disk installable software goes, the Amiga has been left out in the cold.

Software publishers justify their lack of support for Amiga hard disk owners by insisting that piracy is too big a problem and that few Amiga owners actually own hard drives.

Well, I for one feel deeply put out when I have to suffer a four-disk floppy swap just because software publishers can't or won't protect their games adequately.

What's wrong with manual or codewheel protection? Sure, it won't stop the big-time hacker, but then you never will. What it will do is reduce the chances of the small-time pirate copying software and distributing it.

Although software publishers will tell you otherwise, PC piracy is becoming just as much of a problem as Amiga piracy, yet all PC games are installable and very few have any form of copy protection. In 1993 more than 700,000 CD games were copied!

Action should be taken to reduce piracy but not at the expense of law-abiding Amiga owners who are paying £25 to £35 a game and expect bug-free, hard disk installable software.

And to insist that there are few hard disk owners is totally untrue – and with the advent of the A1200 there are more hard disk users now than ever before! In a recent survey in *Amiga Computing*, 40 per cent of readers claimed they owned hard drives.

It's about time software publishers stopped treating us Amiga owners like brainless morons who have nothing better to do other than play arcade games and then copy them.

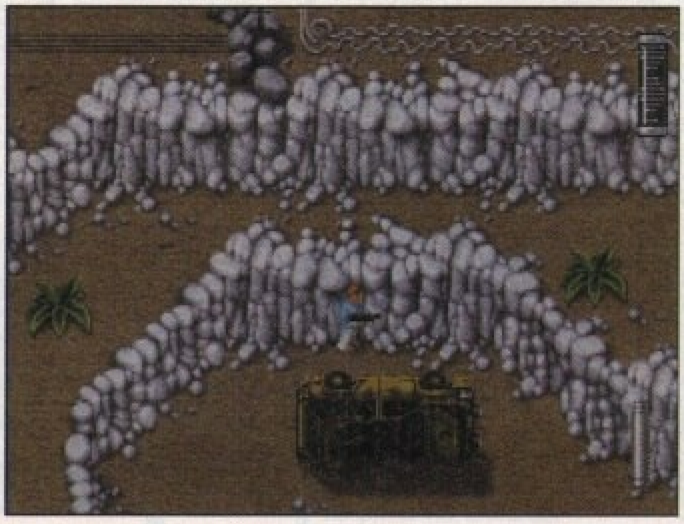
Most of us have second disk drives, yet some companies still support only one drive with two disk games. Many own hard drives yet most Amiga software is not hard drive installable.

And all of us want to be entertained with high quality, impressive software, but still games are released that are bugged and lacking in originality. If the software publishers have a problem with piracy, then they should sort it out, instead of making the rest of us loyal Amiga owners suffer.

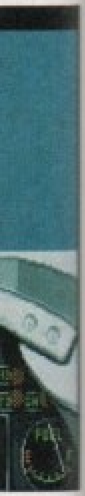
We are all responsible for the growth of this industry in some form or another and the sooner software publishers realise this the better. They are only damaging their own image and chances of success in the future.

So, guilty parties, please take note and change your attitudes or expect to see more articles of this kind in future – something none of us want to happen.

AC



Probably the most annoying floppy game in the world. Jurassic Park would have benefited considerably from a hard drive install option



After-sale lessons

Debbie Durrant is public relations manager at Digital Integration. I spoke to her about Tornado, and after-sale support for purchasers.

"If there are any Tornado Amiga owners having problems or they simply need help they can of course ring our helpline. We are also updating the master disks in which we have cured as many bugs as we possibly can."

As for the future, DI have much more to offer as far as Tornado Amiga goes. Debbie explains:

"We are definitely releasing a dedicated A1200 version of Tornado, scheduled for release mid to end March 94. This version will have 256 colours and PC standard graphics – and hard drive mandatory."

Registered users will be able to upgrade from the A500 version of Tornado to the dedicated version for a nominal charge.

Digital Integration are also developing the Operation Desert Storm data disk but unfortunately it will only be compatible with the dedicated A1200 version. This is scheduled for May 94.

This kind of after-sales support is fairly rare but hopefully other software publishers will take notice and change their rather blasé attitudes.



I've got the power

A1200 owners can turbo-charge their Amigas with the A1230 Turbo+, the most advanced accelerator and RAM expansion to date, says Steve White

Anyone who owns an A1200 can't have failed to notice that, even though it boasts an 020 processor, the speed increase often isn't much better than that of a 68000-based Amiga.

Working in AGA mode can prove a nightmare, especially with a measly 2Mb of Chip RAM, raped, plundered and pillaged by the machine itself and any programs that are running at the time.

The obvious upgrade is a Fast RAM expansion to relieve the strain on the chips, but you're still left with an Amiga that drags its feet and doubles over at the mere sniff of a complex 3D project, animation or game.

Fortunately, GVP have the hardware that will make even an A4000 owner turn green with envy – the A1230 Turbo+ accelerator and RAM expansion with FPU (Floating Point Unit).

The board offers 4Mb of Fast RAM, upgradable to 32Mb using 32-bit Simm chips, an 030 processor running at 50MHz with an optional FPU 68882 (capable of performing decimal arithmetic calculations many times faster than the main processor), a battery-backed clock and an expansion connector for modular additions to the A1230. Impressive, eh?

On first inspection the unit appears fairly robust, complemented by a manual that is both clear and concise with instructions written with the novice in mind. An improved trapdoor cover is also supplied, remoulded in order to compensate for the size and shape of the A1230.

The most arduous task in fitting the board is getting it into the bloody expansion slot beneath the A1200. This is not a fault of GVP but is instead due to poor design by Commodore.

Once the A1230 is in place and snugly connected to the expansion bus the driver software must be installed. As with all recent GVP products the installer disk is neatly designed and simple to use. There are several programs on the disk which allow you to test the Fast RAM and view information about the board itself.

Certainly the most important part of the software is the Kickstart ROM remapping program which resides in the WBStartup drawer. When the software is installed the A1200 Kickstart is allocated an area of 32-bit Fast RAM, normally 512k which it can reside in.



Here you can see the Imagine picture that was rendered using a base A1200 running the standard Imagine program and the A1200 fitted with the A1230 Turbo+ and running the FPU version of Imagine. The differences in rendering time were substantial. The standard machine took 14m 39s while the accelerated machine took only 2m 35s

REMAPPING

As the A1230's memory can be accessed far quicker than the ROM chips in the A1200 this greatly speeds the Workbench up and the accessing of programs. However, the board must have at least 4Mb of Fast RAM in order for the ROM remapping to succeed.

With the board fitted and software correctly installed the speed difference is instantly noticeable and quite shocking! Using a reliable benchtest program running the infamous Beachball test in which a beach ball is rendered on the screen, the accelerated A1200 was 65 times faster than a standard A1200 with no Fast RAM.

Other tests produced similar results with the accelerated A1200 far out-pacing the standard machine and simply wiping the floor with the A500 Plus.

However, benchtests are one thing – the true test comes with applications software, more so graphical applications which require extensive rendering times and rely heavily on processor power.

The tests were performed using Imagine and Imagine FP, the latter utilises the FPU in the A1230. A complex 3D image was rendered using both programs and the time differences noted. Although the standard Imagine program performed relatively well, rendering the image in 14m 39s, the FPU version made swift work of the image rendering it in an amazing 2m 35s.

Apart from testing out the customary graphical rendering times the A1230 was also tested with a variety of games, mainly Tornado and Formula 1 Grand Prix.

Tornado, which is virtually impossible to play on a bog-standard A1200 performed admirably under the A1230. Even on maximum graphic settings it was fast and smooth in every department. The same was true of F1GP with the cars hurtling around the tracks at hair-raising speed The A1230 Turbo+ is a fairly expensive piece of equipment but the increase in speed is worth every penny. As a standalone machine, the A1200 is fairly basic and somewhat lacking when it comes to rendering complex 3D shapes and running 3D intensive games.

But the addition of the A1230 turns it into a speed demon with unparalleled performance which even the A4000 has trouble matching. Once installed it will change your life forever and make the impossible possible. AC

The bottom line

Product: A1230 Turbo+
Supplier: Silica
Price: £579
Phone: 081-309 1111

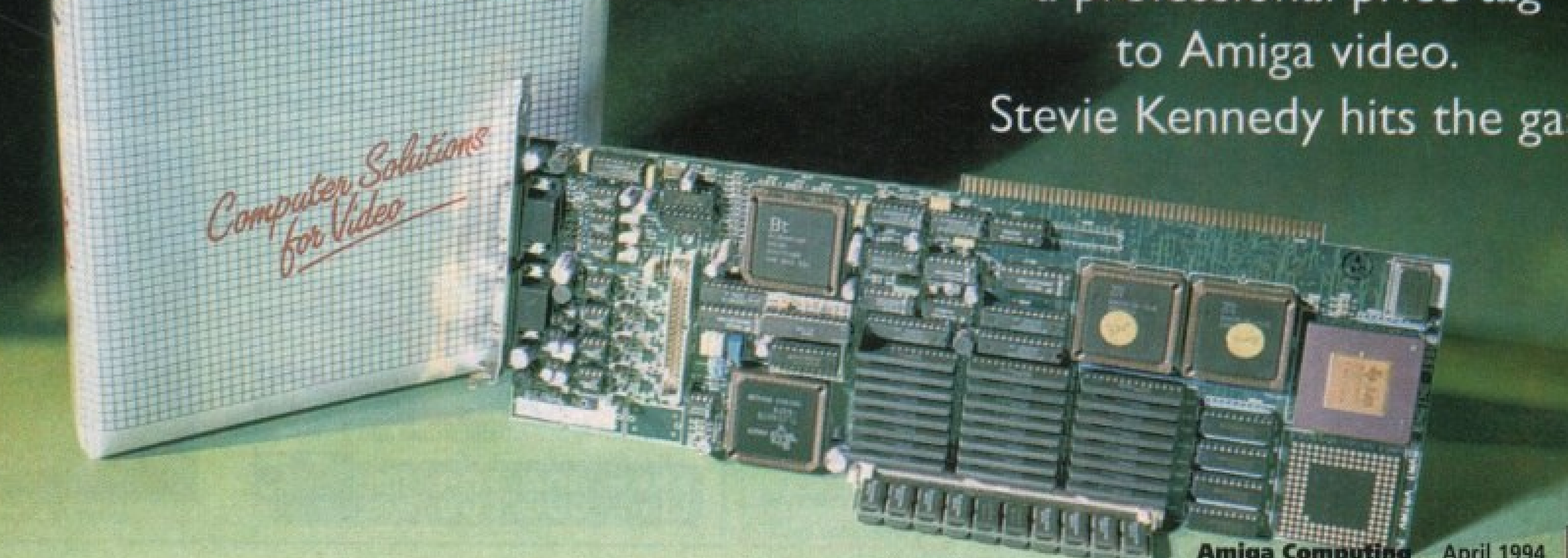
Ease of use 9
Implementation 10
Value for money 9
Overall 9



Comparing these benchmarks you can see just how fast the A1230 Turbo+ is. Four tests were performed; Dhrystone and IMath which utilise the 030 processor, and BeachBall and Savage which make extensive use of the FPU. By looking at the resultant graphs you can see the comparison between the accelerated A1200 and the standard A1200 with no Fast RAM. The difference in speed is astronomical

The video V6

Image Engine brings professional features and a professional price tag to Amiga video. Stevie Kennedy hits the gas



The whole thrust of the Amiga video market has always been to cut the huge price tags out of computer video work, and to this end a stream of cheap and cheerful digitisers, genlocks, and 24-bit cards has flowed from the manufacturers into the eager hands of thousands of Amiga videographers.

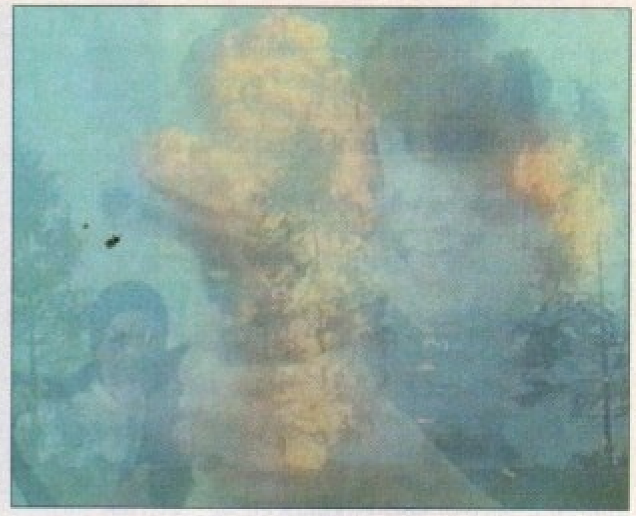
There have always been high-end Amiga add-ons aimed at the semi-professional and professional markets, though, and G2 Systems have been responsible for several of them.

Starting with the successful VideoCenter range of high quality genlocks, keyers, and faders, G2 have expanded their range of products to cover just about everything the video user might need. A gap in the range was left when the MasterPiece 24-bit card was discontinued, and G2's response is Image Engine.

Fitting in any Zorro slot, Image Engine is a 32-bit graphics card with on-board graphics processor, 3Mb VRAM to enable double buffering and the use of an 8-bit alpha channel, and an optional 8Mb RAM. The on-board processor is theTexas Instruments 34020, a dedicated graphics chip which can run at high speed, but which requires software to be specially coded to take advantage of it.

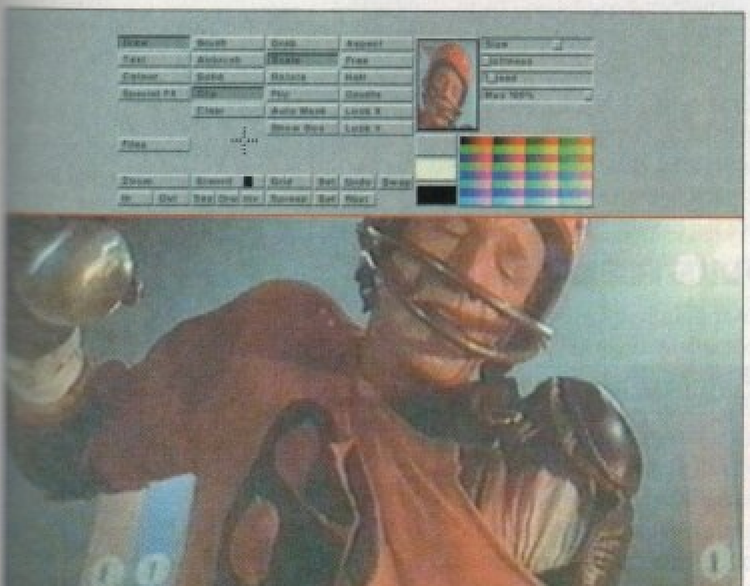
PROFESSIONAL

Other system requirements soon put Image Engine well beyond the enthusiast market and into the professional domain. The board's only video input is in the form of a component RGB port, so a video splitter is required for any work with composite or Y/C, and as Image Engine is designed with an external sync in mind, a time base corrector is essential when using domestic VCRs.



Variable rub through results in flexible mixes between images

Our test was carried out with a Panasonic FS90 S-VHS video recorder, one of the better household units, and though the card's real-time digitiser would grab "on the fly", the sync signal from the VCR was not to Image Engine's liking. Using the Panasonic's perfect pause for grabbing reduced sync levels to the point where the picture started to roll, and only with the correcting influence of a TBC was Image Engine comfortable with the input.



Live video preview is available behind all Imagica's menus

In total, then, the ideal minimum set-up includes £800 worth of TBC or a sync generator, and £285 worth of RGB splitter (G2 supply the Sony YR-1000 for this purpose), bringing the equipment budget to over £3,000 and putting the card well out of the enthusiast's price bracket. So what professional benefits did we get for our money?

Before using a TBC, grab quality from Image Engine was, if anything, poorer than the £300 VLab card and certainly no better than Rombo's Vidi Amiga 24. Once the system settled down, however, and a higher quality signal was being used, Image Engine started to shine.

Real-time grabs in crisp detail without appreciable interlace flicker started to roll onto the hard drive for use with the Imagica software, and before long I was able to start working in a productive fashion.

Imagica's ease of use helps the process along quite nicely, and as paint packages go it is a smooth performer, though not quite up to the standards of TVPaint or TVPaint Jr. Designed for the professional user, Imagica shamelessly apes the way in which Quantel's Paintbox software operates, with all menus available from a pop-down panel.

The package is divided into several parts, each concentrating on an area such as Draw, Brush, Video, and Stencil, and without using the manual it is easy enough to get to grips with most functions.

One surprising observation was that despite the 8Mb RAM and 3Mb VRAM ➤

coupled to the TI34020, Imagica couldn't be described as the world's fastest paint package, and compares poorly in some respects with EGS Paint on the Spectrum 24/28.

Most operations are smooth enough, but when flood fills or area filters are brought into play – never mind the airbrush feature – speed suffers badly. To compensate for this, brush handling is very good. Scaling and rotation in particular are easy and quick, and the skew feature is also pleasingly fast.

Disappointingly, soft edged brushes aren't directly supported as in TV Paint, though a sort of soft edging can be achieved through the stencil tool. This latter is probably the best and most fully featured tool Imagica can boast, and lends the videographer a fair degree of flexibility.

Stencils can be set up using solid colours in the usual fashion, but with the use of three tolerance settings a great many more effects can be pressed into service. Sliders on the stencil window can be used to select chrominance (colour), luminance (brightness), or difference as a percentage of the area being masked so that the user can soft edge the stencil itself.

KEYER

This won't work with the standard setup, but when a linear keyer is used in combination with Image Engine, the stencil feature works with the alpha channel to provide 256 layers of bleed for on-screen graphics of all kinds.

With the full kit it is possible to produce finished video sequences to match many TV stations, but only digital keying is catered for internally, and this is much less effective.

Text support is an area where Imagica at once impresses and disappoints. Both bitmap and outline CompuGraphic fonts are supported, so the user can take advantage of the many superb typefaces supplied by shareware libraries, font handling is fast, and any user-defined gradient can be applied to give the finished titles a snazzy appearance, but there are a couple of bugs in the way text is handled.

Typing directly over a live video signal is easy enough, a fact which enables the correct matching of colours, but once the first line of text has been stamped down, all subsequent text suffers from screen corruption.



Once assisted by a TBC, the grabber can capture even fast moving images

The bug is an infuriating one and limits the use of text over graphics and video, and one can only hope that G2 sort it out as soon as possible.

Beyond this annoying glitch, text handling is actually very good. The user can set varying levels of anti-aliasing, and as all text is treated as a brush, it is possible to rotate, flip, and skew titles before stamping them down.

In conjuction with the varying rub through and transparency controls available for all functions, it would be possible to create advanced text effects if only the bug were eradicated.

On the main control panel, three sliders are used to set the speed at which a painting effect is applied (of most use with the airbrush), and the weight of paint to be used.

In effect, this slider simply makes use of the board's alpha channel to produce transparency effects which can be applied to all features from flood fills to text.

Rub through is the most impressive option to use transparency, and works by "rubbing through" the foreground image to partly reveal the background image held in Image Engine's second 24-bit buffer.

As a full screen effect, rub through can be used to blend two images, and when used with a text brush or other complex shape it is capable of producing pretty snazzy results.

Unfortunately, Imagica doesn't have a direct equivalent of TVPaint's density tool, so soft edged text brushes and flood fills are not possible. This is perhaps a tool which only a minority of videographers would at first require, but it adds a new level of flexibility and should have been included in a package with professional aims and a price tag to suit.

POWERFUL

Another disappointment was the texture feature, potentially the most powerful brush related tool in Imagica's arsenal. Texture is used to grab a brush, then tile, fit, or map it to any shape the user chooses.

In this way, TVPaint is able to give the impression that a brush (someone's face, for example) has been wrapped onto a sphere by simply fitting the image into a circle. Imagica has this feature, but it was not implemented in the current version of the software.

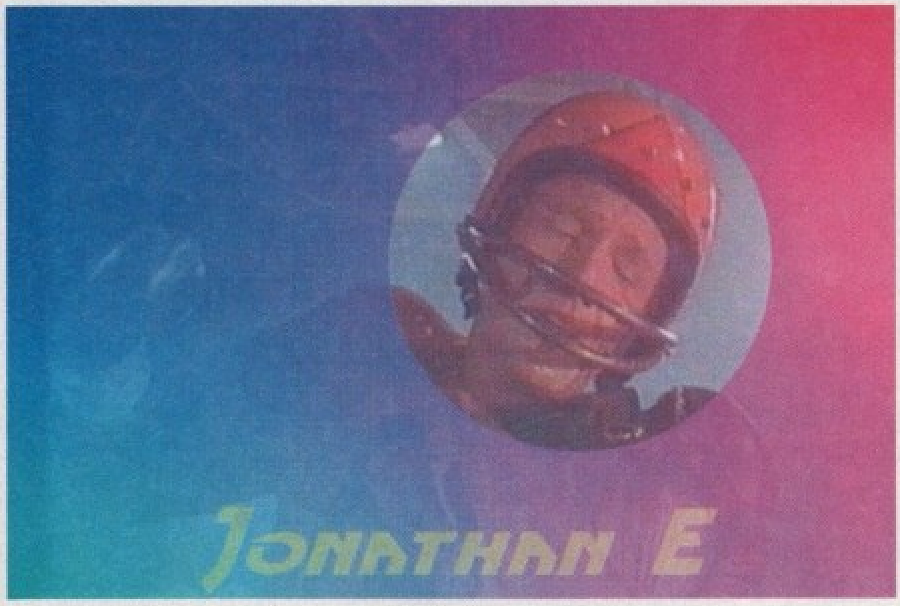
Only the tile method of texture mapping works, a crude fill feature which can be used to create neat backgrounds from small brushes but which is nowhere near as flexible as the oppositions' textures. When the Fit and Map options are enabled, Imagica will have more of an answer to TVPaint, but for the moment it is let down in this area.

The remaining paint features, including smooth and smear, are impressive and fill the package out, but the filtering option is of most use. Using a rectangular filter or the gauss option any video grab can be cleaned up automatically to partly remove any interlace jitter, and the Sobel filters create very nice embossed effects.

In context, Imagica isn't really good value for money when compared to the newly priced TVPaint, but in combination with Image Engine's hardware features it does make for a good video production tool.

For professional users looking to buy a complete system or a card which will fit smoothly into an existing professional setup, Image Engine and Imagica make for a solid team.

Those on a budget or who use mostly Y/C or composite video will probably want to save a small fortune and go for one the Amiga's much cheaper, if non-professional, solutions. AC



Transparent text and rub through working together in image composition

Jargon buster

component vs composite Component video signals are composed of separate red, green, bluue, and synchronisation signals, as opposed to composite where the RGB information is passed along the same cable. Component video is of a much higher quality and is used only by professionals

Y/C (S-VHS) A halfway house between composite video (CVBS) and component. Y/C video signals are composed of two streams, one for luminance, and one for chrominance. S-VHS video is simply a Y/C signal with a separate digital audio track

time base corrector Usually shortened to TBC, time base correctors are the workhorses of the video world and serve to boost and clean up the sync signals from video inputs to ensure that other devices can make a clean lock with them

RGB splitter/encoder A device which splits a composite signal (CVBS or Y/C) into its component reg, green, blue, and sync signals for use with high-end equipment

alpha channel An 8-bit (256-level) mask used to fade one image or video signal into or over another. Used mainly by linear keyers as a reference for the way in which one signal keys over another

linear keyer An expensive piece of video hardware which utilises alpha channel signals to blend two live video signals over (usually) 256 steps

digital keyer Usually found in the common or garden genlock, a digital keyer simply slaps a computer image over a video signal using a single colour (usually colour zero) to produce simple titling and other effects

SYSTEM ESSENTIALS

RED = Essential YELLOW = Recommended

12 Mb RAM

Zorro

Video gear required

Hard drive

The bottom line

Ease of use 8
Implementation 7
Value for money 5
Overall 6

Supplier: G2 Systems
Phone: 0252 737151
Prices: Image Engine £1,400
Imagica £816

Power

It's all hands on deck as Paul Overaa takes a look at Helm, an impressive new piece of multimedia authoring software

With powerful graphics and sound facilities there was never any doubt that the Amiga was going to make an ideal platform for multimedia presentation work.

Now heavyweight packages like Scala may have already set the standard at the top end of the marketplace. But as far as multimedia authoring systems in general are concerned, the field is still wide open and some interesting new products are beginning to emerge.

One such offering, from Eagle Tree Software, is called Helm. It's a complete multimedia authoring system that allows users, even those without programming experience, to create fully-fledged multimedia presentations.

Helm can also be used to build certain types of applications software such as simple database or interactive questionnaire programs. Its approach to the creation of its electronic books is "object oriented".

GRAPHICAL

This may sound all very fancy but what it really means is that you set up and define the pages of these books by creating various graphical objects and moving them around using the mouse.

The usual first step is to set up the overall framework by creating a Form definition. A Form is the name given to a book's master page and this can contain objects which are inherited, ie shared, by all other pages of the book.

If, for example, you were creating an address book database, you might set up the form with Name, Address, and Telephone Number textfields so that these items appeared on every page of the book.

Eight basic types of Helm objects are available: Selectors, charts, shapes, buttons, imagefields, textfields, timers, and PIPfields (a specialist IV24 Videographics card field).

Within these basic categories all manner of parameters can be adjusted and, as you'll see from the example screenshots, there is plenty of scope for variety.

Selectors are ready-made groups of buttons and text. There's a calendar, radio box, some sliders, a pop-up menu, clock, file selector, multiple choice requester, and various other ready-made units available. Charts let you display values graphically using bar graphs, scattergraphs, pie charts and so on. Imagefields are used for picture type graphics and can be linked to either ILBM pics/brushes or ANIM-5 files.

Timers objects are useful for creating kiosk-type automated books that move from page to page of their own accord. Even the humble textfield provides a bit of a surprise: In addition to the expected characteristics, such as being able to link them to Ascii files and use any font or colour, Hypertext links can be added to words or phrases.

Helm has its own integral art package which provides all-common types of drawing modes and effects (gradient fills, adjustable air brushes and so on). There are some nice extras like reduction of pictures to black/white and antique (sepia) tone thrown in as well.

Once images are incorporated into imagefields the facilities become rather different from conventional drawing programs like DPaint because the objects can then be moved around as separate entities.

Object creation and editing is extremely easy. Suppose on every page you want two identically sized button gadgets labelled Last Page and Next Page to allow the user to move between the various pages of a book.

Select the Edit Form menu option, choose the button gadget tool, and then use the mouse to mark out a rectangle of a suitable size. Helm automatically creates a button gadget of that size for you.

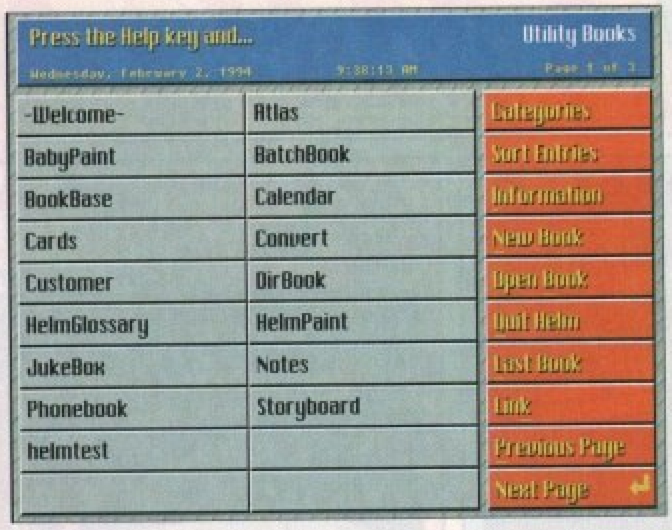
When this gadget is selected control points appear which enable you to move it around or, if necessary, change its size. Objects can be cut, copied and pasted and NxM object duplication options are available which allow things like identical looking gadget arrays to be produced within seconds.

Once created other characteristics, such as colour and gadget text, could then be changed by double clicking on the objects and altering the parameters in the information requester boxes that appear.

These types of object creation steps are continued until both the form and/or individual page layouts are deemed satisfactory. At this stage you've basically created one or more pages of objects and the next step is to 'program' any object that has to do anything.

There are two ways of doing this and the first option is to use pre-programmed actions. To add an action to an object you pick up the action from a catalogue list provided by Helm's Action Editor and just drop it into the action list of the object.

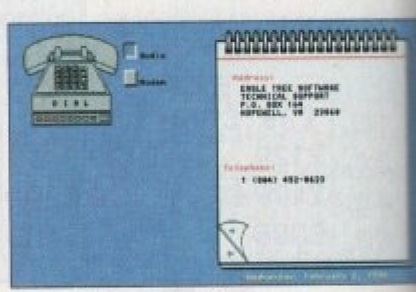
What sort of things can you make an object do? Here are a few possible Helm actions to whet your appetite. You can go to a specific page, execute a program or DOS command (or ARexx script), open AmigaGuide documents, move objects, play SMUS music files, use the narrator, display pictures or animations, scroll text in textfields, send text to the serial device



Helm's BookShelf front end provides easy access to projects



Music for the masses!

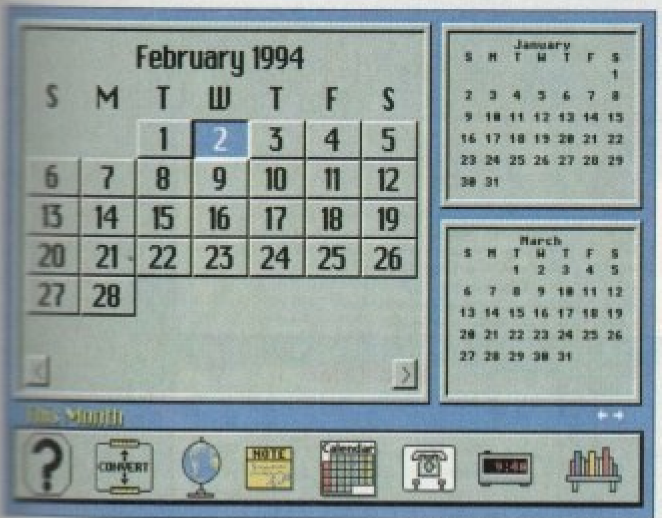


A simple Helm-produced address book database

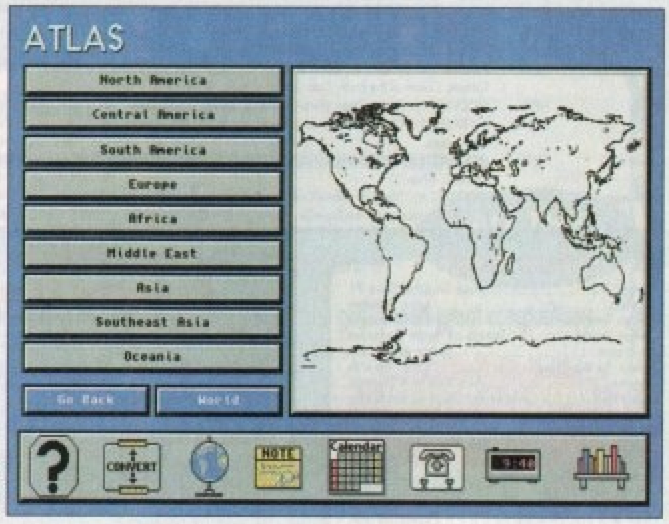
The ARexx connection

If you want to send ARexx commands to other programs you can use the Helm script language ARexx command. You can, for example, enter a complete ARexx script into a textfield object and execute it using:

arexx textfield

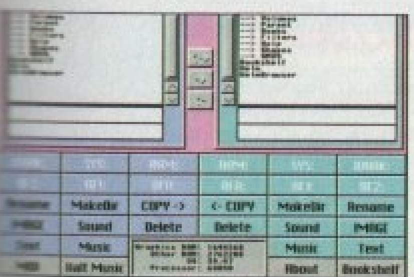


Making a date with Helm



Gadget-controlled multimedia displays like these are surprisingly easy to produce

steering



Helm has many potential areas of application

and play 8SVX sound samples.

Actions can incorporate visual effects like fades, dissolves, scrolls and wipes and you can even make various page layers and objects visible or invisible.

In case you're wondering why you might want invisible objects in a book try this idea for size. You could have a picture of the map of the world on a page and draw irregular polygons around countries of interest.

You then attach goto actions to these polygon objects that cause a page of information about that country to be displayed. Render those polygons invisible so that only the map itself is displayed and the net effect is that as a user clicks on various countries they'll be sent to the appropriate pages of information. Neat eh!

Hypertext link actions are treated in just the same way as other object actions. So, links created in text files can not only be set to move to a different area of text but can cause other actions to be performed as well.

All these things give the non-programmer the ability to hook up different tasks to objects simply and easily. Needless to say these facilities on their own are, for many applications, more than adequate.

Helm has plenty of other goodies as well. There are menu creation options, genlock and CDTV commands. Books, pages, images, and reports can be sent to the printer or a PostScript device. A talking people facility allows the narrator to be synchronised to animated figures.

Five user levels are available which allow a book creator to limit the way in which a book is used (these include a navigate, that is view only, mode for multimedia presentations). Password protection is also available to keep end users from changing the user level.

Helm's approach to book creation is a bit like the object-oriented interface used by, say, Inovatronic's PowerWindows, although far more powerful.

There are a lot of facilities available and, as with all packages of this size, you can easily get a bit overwhelmed initially. During the first few days I got lost more than a few times and once even managed to reset the user level of one particular project to a browse-only state which prevented further editing.

The manual is quite good in this respect and there is a chapter that deals in some detail with common problems and their solutions. OK, so I panicked a few times, but overall the whole learning process was enjoyable and within a couple of days Helm had become both fun to use and a productive tool.

But is it good bye or good buy? Well, the latter. If you haven't guessed already I'm impressed with Helm. I'm not saying it's perfect in every respect but it is a well priced, clever, and very capable piece of software.

Equally important, there are no dongles or other multimedia use restrictions to contend with so, once your multimedia masterpieces are complete, they are yours to do what you want with.

In fact Helm provides a separate browser program that can be distributed freely to enable other Amiga users to read Helm-created books.

Helm runs on any Amiga with 1Mb or more of memory and Kickstart 1.3 or higher but you need Release 3 and the AGA chipset to use all of Helm's features.

The package comes supplied on three disks along with a fairly plain looking, but comprehensive and useful, A4 manual. The files on the disks are packed but both floppy and hard disk installation (using the now standard Amiga installer program) is straightforward.

The version of Helm that I reviewed (v1.44) did have a few bugs but let me emphasise that there was nothing bug-wise that I would describe as serious.

WINDOW

I found that an uncloseable output window can occur when attempting, via ARexx, to open books that do not exist. I also found that some of my external ARexx control scripts were returning errors for no obvious reason.

It turns out that the ARexx error indicator was not being set properly by Helm itself but having spoken to Eagle Tree Software I already know that these bugs, along with a few others that I hadn't been able to find, are being fixed in the latest release.

As with all multimedia authoring packages, the results you'll get from Helm will be proportional to the effort put into your work. Make no mistake though; Helm itself will not hold you back – it's perfectly good enough for serious multimedia applications and as such it deserves to do very well indeed.

Running on auto-pilot

Helm has a definite feather in its cap in the form of its own language, which allows you to program objects to perform arbitrarily complex sets of actions.

The language is a rather strange mix of Basic, ARexx and an English phrase-styled database language, but it is comprehensive and provides a reasonable selection of control structures. If-then testing, while, do-while and for loops, and even multiple choice case statements are all provided.

The language doesn't use variables as such; it uses things called containers that can be used to store anything from numbers and text items to graphics images and music files.

Container arrays are supported and the language commands cover everything from dedicated book manipulation and multimedia actions, maths functions and disk I/O (including a positional file seek command), to specialised Helm system functions.

At times the language, at least with simple scripts, looks almost like written English, as this following page movement example shows:

```
On SelectUp ' right arrow
begin
go to next page
end
```

You wouldn't, incidentally, actually have to write scripts for performing these type of simple page turning operations because Helm has pre-programmed actions available for this.

SYSTEM ESSENTIALS

RED = Essential YELLOW = Recommended

1 Mb	1.3
RAM	Kickstart or later

The bottom line

Product: Helm
Supplier: Meridian Software
Price: £99.95
Phone: 081-543 3500

Ease of use 9
Implementation 9
Value for money
Overall 9

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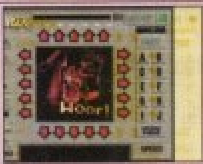
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An exciting new up to date version of Pacman. If you liked the original you'll love this latest version of an all time Atari classic. Order a copy now

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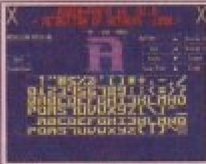
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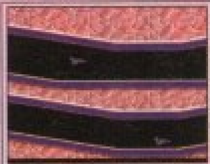
A new shareware racing game, featuring fast & smooth graphics, with a neat 2 player option you can also set your cars colour, speed, acceleration etc.

☐ **C871. MOOSE DRIVER**



Now you can design your own fonts for use in Deluxe Paint etc. over 70 additional fonts are also supplied. A very easy to use package. Don't miss it.
Pack price *Only £7.00*

☐ **FNT7-3. FONT EDITOR**



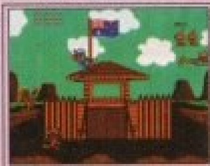
Amazingly fast paced Arcade action. The object is simple – get to the end of the tunnel without being killed. Very addictive stuff. Great graphics

☐ **C715. SPATIAL HYPERDRIVE**



If you want to create stunning Amiga music then this new version of Octamed Pro 2. Easy to use, & comes with complete instruction. *Sample disks available.*

☐ **C721. OCTAMED PRO 2**



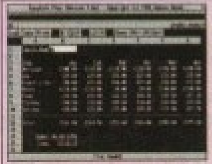
Four classic Early Eighties LCD games. Includes: Octopus, Fire Attack, Oil Panic, & Paracute, all of which have been totally re-vamped for the Amiga

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☐ **C821. DESK TOP VIDEO**



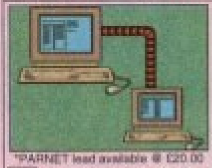
Easy Calc Plus is the most powerful spreadsheet available on the Amiga. Contains most Lotus 123 features. Instructions included on disk.

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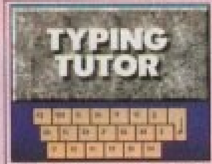
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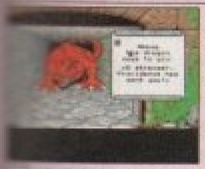
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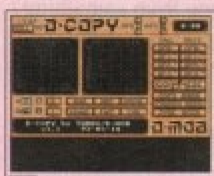
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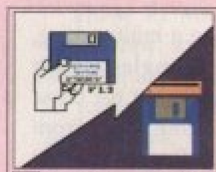
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DMO7-3. DEMO MAKERS



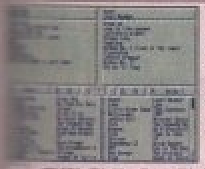
Dcopy 3.1 is the most up to date PD copier available. Copy modes include Dos, various Nibble modes, Bam copy and more. If you want a good copier get this.

C576. DCOPY 3.1



A collection of A1200 degrader tools, it allows you to temporarily downgrade your A1200 so most older games work on your new Amiga. Essential.

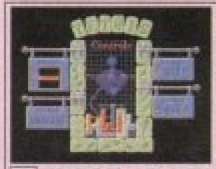
C356. A1200 DEGRADERS



The complete system for cataloguing your Video, CD, Disk & Music collection, three disks of databases to keep track of your entertainment media.

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CTG5-3. CATALOGERS



A1200 owners here is a great Tetris clone. All the best features that you have come to expect from this very addictive game. A must for your collection.

C287. GIGAR TETRIS



This is the best Fruit Machine Simulator available. Features the best graphics you're likely to see on a fruit machine sim. An excellent game by Mental Image.

C614. WINNING POST



Double the space on your Hard disk, if you've got an 80meg you'll have over 150meg with this safe hard drive stacker, also works with floppies.

C625. EPU DISK STACK



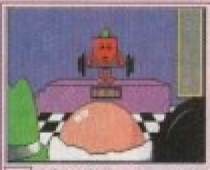
If Poker's your game then this is it. Features lovely smooth professional quality graphics. Full House Poker is the best PD card game available.

B843. FULL HOUSE



Turn your Amiga into a PCXT. This demo version will run most XT software. Ideal for people that need both machines. The full version is available priced at £39.95

C554. PC TASK



Mr Men Olympics, up to 8 players can compete in a number of Olympic games, including Hurdles, 100 metres, Weight lifting, etc. (2 disks)

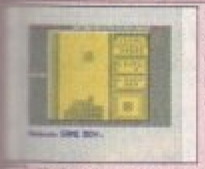
C623-2. MR MEN



Speed up the access of your disk drives with this memory resident disk accelerator, runs quietly in the background of your Workbench.

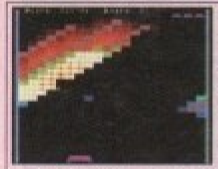
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TDK4-2. TURBO DISK



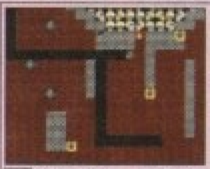
Here's a version of gameboy tetris that you can play on your Amiga. A perfect transition, down to every detail.

B952. GAMEBOY TETRIS



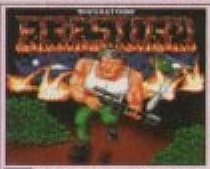
"What a great game" That's what we have been told by everyone who has tried this great Breakout clone, and we have to agree. Don't miss it!

C888. MEGA BALL AGA



Robouldix is a new and addictive Amiga version of Boulderdash, now with updated graphics and sound. A very addictive game, not to be missed.

C635. ROBOULDIX



Operation Firestorm is by far the most professional looking Arcade shoot'em up available on shareware. Stunning graphics, gamesplay, & sound. Don't miss it.

C777. OP. FIRESTORM



If fast paced shoot'em up's are what you like, you'll like this. Cybernetix is possibly one of the best shoot'em ups available, PD or commercial!

B973. CYBERNETIX



If you enjoy "shoot'em ups" then this is for you. Fast action and high speed are just two of the reasons this is such a good game.

C462. STARIANS



Rated as the Best to budget word processor available. It now includes a superb spellchecker. Version 4.1 is now available.

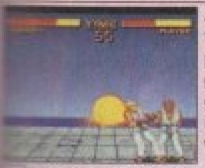
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A must for all Star Trek fans, a four disk AGA collection of very high quality pictures of Next Generation Space craft. Including: Enterprise, Klingon & Romulon. Well over 30 images.

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SRT7-4. STARTREK AGA



A PD version of Street fighter II, same professional graphics and game play. Even if you've got SF2 get a copy of this. It loads up a lot faster as well.

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Run all your 48k Speccy software on the Amiga, very easy to use. Over 40 classic Spectrum games supplied, you can load from cassette via a standard sound sampler.

Other games available!

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SPEC5-3. SPECTRUM



A super face top view car racing game, a lovely piece of programming, 2 player option included.

C745. HIGH OCTANE



A very popular arcade game, Drop rocks on Ork's heads and watch them splat. A very "Bloody" game. Over 16 year olds only.

Lots of Blood & Guts

C801. ORK ATTACK



SpaceBalls' State of the Art is one of the most Spectacular & popular Amiga rave demos around, now the second part is here, even bigger and even better, 2 great disks. Unreal!

C793-2. SPACEBALLS 2



Feel the pressure of being in the "tower" and controlling the landing and taking off of aircraft. A great management/ strategy game.

C468. AIRPORT



If you want 100% error free disks then a box of quality tested disks with labels is your best choice. So when ordering PD ask for a box of Ten.

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BLK5-10 TEN BLANK DISKS



Possibly the best graphics converter available. Convert between PCX, IFF, Degas and loads more.

C840. GRAPHICS GRIND



An up to date conversion of the classic Bomb Jack, lovely colourful graphics, and superb sound make this an all round addictive game.

C169. BOMB JACKY



A very good platform game, great graphics and game play. Numerous levels to guide Billy through escaping the onslaught of spotlights. Not to be missed!

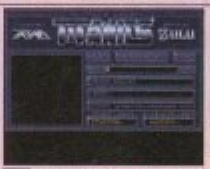
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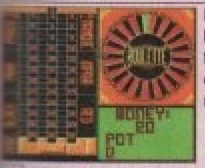
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CRM5-2. CRUNCH MANIA



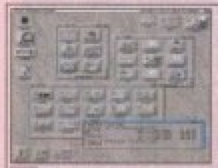
Do you like gambling but hate losing money? Well this superb Amiga version of roulette will see you right.

C243. ROULETTE



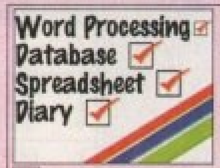
If you're football crazy or like management games then this is a must. Guide your chosen team to the top of the premier league.

C506. PREMIER PICKS



Transform your Workbench 2/3 into a new more stylish 8 colour system. 100's of new icons & backdrops. Each icon took the Author over 6 hours to produce.

C772. MAGIC WB



The perfect partner for home of office, features a Word processor, Spreadsheet & Database. A powerful companion for all small businesses.

Pack price £7.00

IFC7-3. LITTLE OFFICE



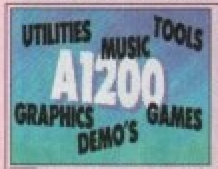
A futuristic fighting game. Battle with a varied range of robot creatures, stylish graphics are just one of this games features.

C276. A.R.E.N.A.



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AGA 15-10. A1200 PACK



Now available on PD the BBC emulator. Now you can emulate the BBC micro computer.

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Amazing

Overshadowed by Emplant, the A-Max Apple Macintosh emulator returns with 16 million colours, new software and an upgrade path. Denny Atkin takes a closer look

When A-Max shipped for the Amiga in 1989, it was an amazing accomplishment. There was a little cartridge you could plug into the back of your Amiga and turn it into an almost completely compatible Macintosh.

Sure, you were turning a multitasking, colour computer into a single-tasking black-and-white computer, but for those who needed to bring home work from Mac programs such as PageMaker or Word, the cartridge was a godsend.

For others, though, the Mac was pretty unexciting compared to the Amiga, and A-Max was just one of those devices that you bragged was available for your Amiga but never really considered buying. Cut to 1994. The formerly boring-but-easy Macintosh has burgeoned into the colourful machine for the arty elite. Sure, its latest attempt at learning to multitask is still rather pitiable, but the two colours of the original Macs have exploded into 16 million.

Mac software has gone from something that was great if you wanted to write letters with so many fonts that they looked like ransom notes to some of the most creative stuff available for personal computers.

Programs like Fractal Design Painter and Kai's Power Tools are fascinating enough to entice even the most jaded Amiga user into wanting to run Macintosh software.

Until recently, the only options for running Mac software on your Amiga were A-Max II, an enhanced version of the original A-Max that took over your Amiga and was still limited to black-and-white emulation, or the far more impressive Emplant board from Utilities Unlimited, which not only supported full colour but also let you run Mac programs concurrently with Amiga software.

Obviously, Emplant has been the emulator of choice for most users since its release. Well, ReadySoft's Simon Douglas, the first to successfully emulate the Macintosh on the Amiga, didn't just sit back and let his product get passed by.

He's been hard at work, and the result is A-Max IV Colour, ReadySoft's competitor in the multitasking, colour Macintosh emulation arena.

A-Max IV Colour is a Zorro II card that will work in the A1500 and higher. It's actually identical to the old A-Max II Plus board, except for new software and one GAL chip which is replaced. You can upgrade an A-Max II Plus to A-Max IV colour. However, the new software won't work on the older A-Max and A-Max II cartridges, so A500/600/1200 owners won't be able to use the product.

A-Max IV is available as a complete package, or as an upgrade to the A-Max II Plus board. Note that once the board is upgraded to A-Max IV level, the older A-Max II Plus emulation software will no longer run on it.

HIGHER

On the Amiga side you'll need at least a 68020 processor (all colour Macs have at least an 020), 2Mb of free RAM, and AmigaDOS 2.1 or higher. To get decent performance you'll really want at least 4Mb of fast RAM, and a hard drive is a must – a Mac without a hard drive is nearly useless.

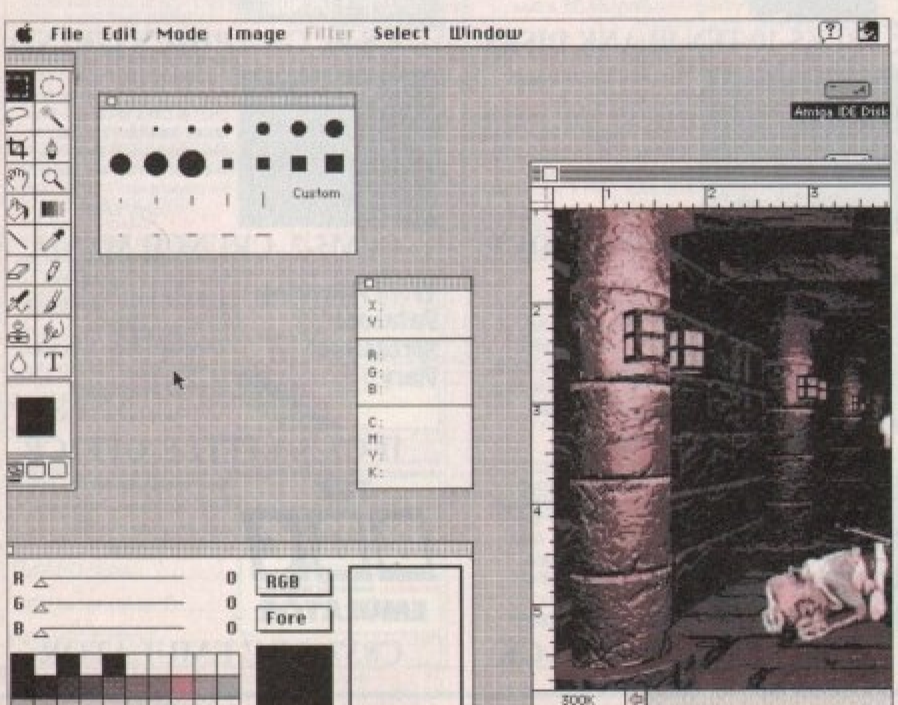
If you have a Commodore high-density disk drive you'll be able to read and write Macintosh 1.44Mb disks while running the emulation – a handy and sometimes necessary feature.

On the Macintosh side, you'll need to secure a legal copy of the Mac's operating system. You'll need a set of 128K Macintosh ROM chips as found in the Mac 512Ke and Mac Plus; these should be readily available for less than £100.

Although the emulation will technically work with Macintosh System 7, which can be found on the on-line networks, it's very limited under that OS, requiring you to



Full colour emulation gives A-Max a new dimension...



...as does running professional software like Adobe Photoshop

The competition

A-Max IV is the obvious choice for owners of earlier A-Max equipment, since it's a fairly inexpensive upgrade. But what if you're buying a Mac emulator for the first time? Should you buy A-Max IV or Utilities Unlimited's Emplant? Each board has advantages, so it will depend on your emulation needs.

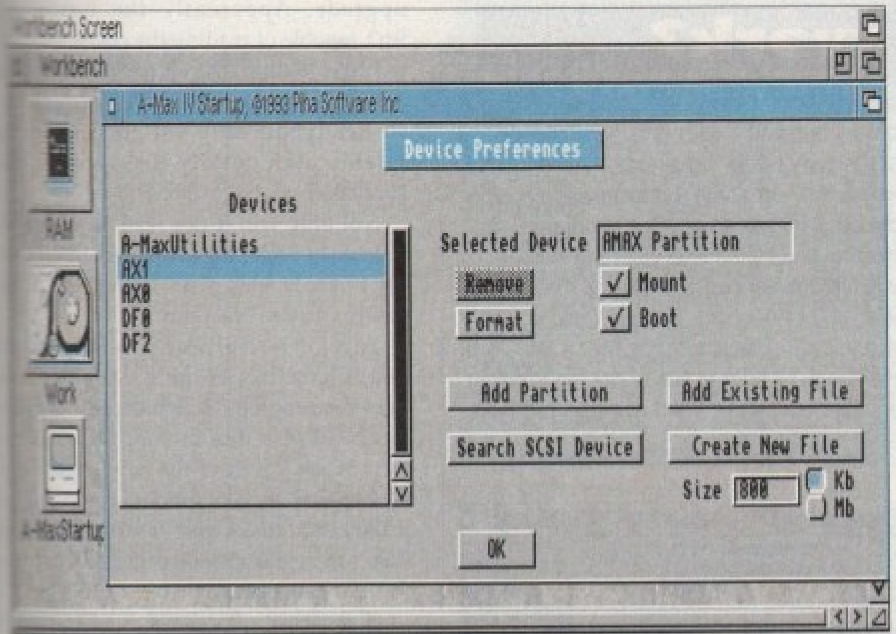
As of this writing, Emplant wins in the compatibility department. Because it uses real Mac II ROM chips and duplicates Macintosh sound hardware on its board, it does a much better job running hardware-intensive applications like games.

SimCity 2000 runs fine on Emplant, while it only brings up a blank screen on A-Max IV. Star Trek: 25th Anniversary, packed with digitised sounds on Emplant, is silent on A-Max IV – and it runs at about 1/5 speed on A-Max. Emplant's graphics updates are faster than A-Max's, but otherwise the emulations run at similar speeds. Emplant benchmarks are remarkably faster in some floating-point operations using the Mac Speedometer benchmark, but in actual operation the emulations feel about the same.

And while Emplant's screen updates are faster, it doesn't offer the really impressive and useful multiple-monitor support that A-Max IV does. Also, A-Max IV offers large, scrolling virtual screens as an option; Emplant doesn't.

Utilities Unlimited are promising advanced file transfer capabilities for a future Emplant update, but as of this writing A-Max wins in that department.

Both emulators allow you to copy files between the systems, but A-Max is capable of copying entire directories at once while Emplant forces you to select each file individually. Also, A-Max's clipboard support is a nice bonus. Emplant forces you to manually choo



Choosing and setting up hard drives can be a pain with any emulator

turn off system caches. System 7.1 or higher is a better bet, and it should be available from any Macintosh dealer.

Installing the board is fairly easy. First, of course, you'll need to plug the Mac ROMs into your A-Max board. Then open your Amiga's case, remove the disk drive cable from your motherboard and attach it to the A-Max IV board.

Attach another cable to the motherboard, slide A-Max IV into a free slot, and close your case. Installation of the emulation software is effortless, as ReadySoft uses Commodore's standard Installer application. Once everything's installed on the Amiga side of things, it's time to set up your new Macintosh. First, you'll need to set up a boot drive.

You have three options for your system disk. The easiest way to get up and running is to connect an actual Macintosh external SCSI drive to your Amiga's SCSI controller. Apple dealers sell these drives with System 7.1 already installed, making it a plug-and-go proposition.

Another option is to dedicate a partition on an Amiga hard drive (SCSI or IDE) to the Macintosh emulation. Finally, you can create a file device – a file on an Amiga drive that looks to the Macintosh like a real hard drive – but this is the slowest available option.

Whichever option you choose, it's much easier to get up and running with third-party controllers as A-Max IV now uses the Amiga operating system to talk to the drives, so you no longer need to find a special .AMHD driver for your hard drive controller. Earlier versions of A-Max couldn't utilise AmigaDOS since they threw the operating system out when running Mac emulation.

If you have a high density floppy drive, installing the Mac operating system software works just like with a real Macintosh. If you have only an 880k floppy drive, though, things will be a little more complicated.

First of all, you'll have to special-order System 7.1 on low-density disks – like most newer Macintosh software, Apple ship the operating system on high-density disks.

Then you'll have to use the A-Max IV disk transfer program to copy all of the installation disks to temporary files on your hard drive and use those to install the operating system. As you can see, you'll save a lot of headaches if you buy a high-density drive.

Once the operating system is installed, you're ready to get up and running. Your system will be essentially equivalent to whatever Macintosh model uses the same microprocessor as in your Amiga. The primary difference is that the A-Max IV board uses the old 128k ROMs, a mixed blessing. The 128k ROMs are less expensive and more readily available than the more recent 256k and 512k ROMs, but you'll pay a bit in compatibility.

These ROMs don't include Colour QuickDraw, so ReadySoft had to add software emulation of the Mac's colour graphics routines to the A-Max software. A few applications, such as Adobe Photoshop 2.5, require Colour QuickDraw in ROM and may be difficult or impossible to get running under A-Max IV.

One of the biggest improvements over earlier versions of A-Max is that this one doesn't take over your system completely – you can run Macintosh and Amiga software simultaneously.

PRIORITY

You can adjust the task priority and how it shares time with the Amiga side of things when running in the foreground or background. You allocate a certain amount of memory (2,100k total by default) to the Macintosh system software and INITs, but after that the emulation dynamically allocates RAM from the Amiga's free memory pool as it needs it.

You can now exchange data between the Mac and Amiga sides of your computer in a number of ways. The A-Max File Transfer program runs under the Mac emulation and will copy individual files or entire directories between Amiga and Mac hard disks.

Files can be copied without modification, or you can use one of the translation options. Text and PostScript options will translate text line endings for the appropriate computer, while the less useful MacPaint translation option will convert between MacPaint pictures and two-colour IFF images.

Finally, MacBinary translation allows you to transfer Macfiles you've downloaded using Amiga programs to the Macintosh side, using the MacBinary ➤

g A-Max?

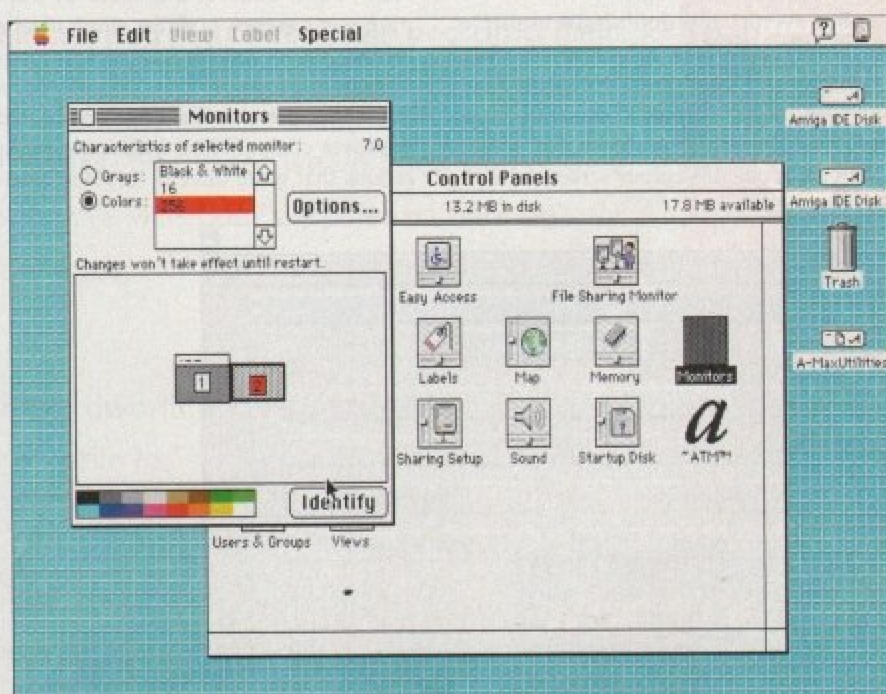
how much memory to allocate for Mac emulation; if you allocate all your fast RAM to the Mac side of things and need it later on the Amiga side, you'll have to shut down and restart the Mac emulation to change the memory setting.

A-Max IV allocates most of its memory as it needs it automatically, so you can just quit particular Mac applications if you need more RAM on the Amiga side.

The serial ports included standard on the A-Max board are only useful under Macintosh emulation. Emplant's optional expansion ports also enhance the Amiga side of the computer; you can use the serial ports for Amiga communications software, and you can attach Amiga storage devices to Emplant's SCSI controller.

A-Max IV is the clear winner if you need to access low-density Macintosh disks, even though that capability is more limited in this new version. Right now the hardware adaptor needed to read and write 800k floppies using Emplant is unavailable, and the only option is to attach a real Macintosh 800k floppy drive using an old A-Max cartridge or a home-built interface. The ROMs needed for A-Max IV are more easily found and less expensive than the ones necessary for Emplant, but they don't seem to be quite as compatible with colour Macintosh software despite ReadySoft's patches.

Finally, Utilities Unlimited are promising new emulation modules for Emplant, whereas A-Max IV Colour is a Macintosh emulator only. The Apple II emulator for Emplant is complete (see last month's issue), and Utilities Unlimited is hard at work on a 486 PC emulator. However, always use caution when making a purchasing decision based on promised, rather than shipping, capabilities.



The Mac's Finder desktop now works in full 256 colours

information to make sure the Mac's information forks are retained.

New to A-Max IV is the ability to transfer text between the Amiga and Mac sides of the computer using the system clipboard. Just make sure that the Finder is the active program on the Mac side and you'll be able to copy and paste between your Macintosh software and any Amiga programs that use the standard system clipboard.

Note that this capability works only for text; graphics and other data can't be transferred via the clipboard.

Along with multitasking, the most attractive improvement in A-Max IV is full colour support. How much colour capability you get depends on how your Amiga is equipped graphically. If your Amiga has the original ECS chip set, you'll be able to run in up to 16 colours – not a huge improvement.

RETINA

AGA-equipped Amiga 4000 machines support 2, 4, 16, or 256 colours. If you have a GfxBase video card, Picasso II, or Retina board plugged into an ECS or AGA machine, you can run in 256 colours or full 24-bit, 16 million colour mode.

If you need Macintosh emulation for applications such as Fractal Design Painter that benefit from 24-bit colour, you'll definitely want to add a video board. For stuff like desktop publishing and Excel, though, you'll find 256 colours sufficient.

One really neat feature that real Macs have is support for multiple video boards. If you plug two video cards in a real Macintosh, you can run two or more monitors off one machine and move the mouse pointer back and forth between them.

A-Max IV implements this useful feature on the Amiga in a couple of ways. First of all, if you have two monitors – one for standard Amiga video and one for your graphics card – and you can set them up to work just like a real Macintosh, moving your pointer and dragging windows from one monitor to the other.

But even if you don't have multiple physical monitors attached to your Amiga, you can open multiple Mac screens on the system. One setup I use fairly often is to create an 800 x 600 Super72-mode 256-colour screen to hold my Photoshop 2.0 editing screen, and a second 640x480 16-colour Productivity-mode screen to hold all the Photoshop tool windows.

That way I can have my editing window unobstructed, but easily and quickly access all my tools. A-Max thinks the second screen is a monitor to the right of the first one, so to change tools I just move the pointer off the right edge of the screen.

The second screen instantly pops to the front, I select my tool, and drag the pointer back off the left side of the screen, returning me to my editing screen.

Video speed is only fair using the native chips in the standard, Accurate refresh mode. The Optimised mode is faster, but it achieves this speed by skipping some screen updates when it falls behind; it's not suitable for Quicktime animations or games.

Finally, there's a Paranoid mode that improves compatibility with some applications that write directly to video hardware, but when it's turned on it dramatically slows screen updates.

The A-Max IV board includes two RS-422 serial ports. These can be used to attach Macintosh modems and printers, or to connect the board to a LocalTalk network. SANA-II-compatible Ethernet boards are also supported for connecting to Ethernet networks.

Unfortunately, no drivers are included for the Amiga side, so you can't use the RS-422 ports as extra serial ports for your Amiga when you're not running the emulation.

A-Max IV can also use your Amiga's built-in serial and parallel ports. I had no problem printing to my parallel printer using the public domain DeskJet 3.1 driver, but I experienced occasional lockups when using the Amiga's serial port with Macintosh communications software.

Communications were flawless when I used a Mac modem cable to connect the same modem directly to the A-Max

Old versions of A-Max would translate ImageWriter printouts to Epson format for printing on dot matrix printers, but the results were poor at best.

If you can't find a Macintosh printer driver for your printer, A-Max IV gives you two options. First, you can select the ImageWriter driver from the Chooser and have A-Max create an IFF image of the bitmap that would have been sent to the ImageWriter; you can then load this into an Amiga paint or desktop publishing program and print it from there.

Although A-Max IV has much better hard drive support than previous versions, floppy support suffered with the upgrade. Apparently the hardware isn't capable of reading the oddly formatted Mac 800k disks when multitasking Amiga and Macintosh programs, so ReadySoft only supports reading 1.44Mb high density disks under the emulation.

Not only will it not read Mac-format 800k disks under the emulation, but it also can't handle 800k disks formatted under earlier versions of A-Max.

To transfer software on 800k disks you'll have to use the A-Max IV Disk Transfer program, which copies floppies to virtual disk files in your Devs: directory. When you boot the emulation these files appear on your Finder screen just as if the actual disks were inserted; you can then run the installation programs or copy the files to your hard drive.

High density floppies can be transparently exchanged between A-Max IV and a real Macintosh. For directly accessing low-density disks created with A-Max IV, you have two options.

UNIQUE

The first is to format 800k disks in a unique format that can only be read by A-Max IV equipped Amigas. The second is to use a special 720k format that can be read by any Macintosh equipped with a 1.44Mb SuperDrive.

The latter option works well in most situations, unless you need the extra 80k of storage. In that case, you'll have to copy the files to an 800k virtual disk file, then use the disk transfer program to copy that to a Mac-format 800k floppy.

As mentioned above, hard disk support is improved. Also, the SCSI Preferences feature can be used to mount other SCSI devices on the Macintosh side. I was able to use this feature to run various Mac multimedia titles using an NEC CD-ROM drive.

A-Max IV does an admirable job running Mac applications, and hopefully ReadySoft will be able to address some of the graphics incompatibilities in a future update.

This is a worthy contender for new emulatin purchasers (see the "Competition" box though), and is a must-have for those who own A-Max II Plus boards.

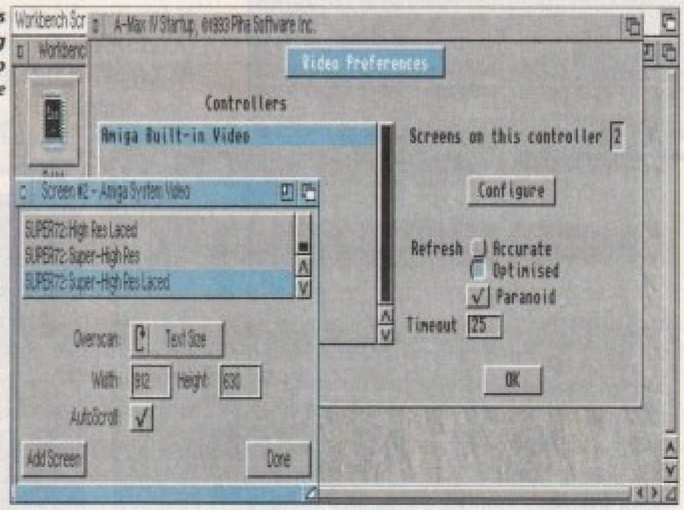
Does it work?

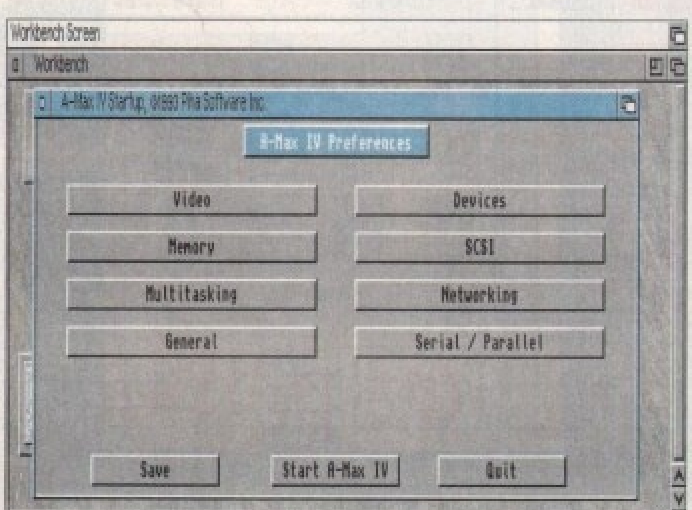
A-Max IV is packed with new features, but how well does it work? Any program so radically upgraded is bound to have a few kinks to work out, and A-Max IV is no exception.

Initial releases of the software have been somewhat flaky on Amiga 4000/040 and other 68040-based machines, locking up inexplicably on some systems and causing errors on the SYS: partitions of others. ReadySoft are hard at work on finding the reasons for these problems and should have them corrected by the time you read this.

Of bigger concern is graphics compatibility. Of all the serious applications that I tried, only Photoshop 2.5 had any problems (the older v2.0 works fine). But the same couldn't be said for games. I was unable to get SimCity 2000, Maelstrom, or Star Trek: 25th Anniversary to work properly under A-Max IV, although all worked fine under the Emplant emulator. Star Trek actually did load, but was unplayably slow. Then again, if you have an Amiga, who needs Mac games?

Full video preferences are available during A-Max's startup sequence





Everything from hard drives to I/O and networking can be fully configured

SYSTEM ESSENTIALS

RED = Essential YELLOW = Recommended

Accelerator | Hard drive | 2 Mb RAM | Hi-res monitor | 4 Mb RAM | Display device

The bottom line

Ease of use: 7
Impelmentation: 7
Value for money: 6
Overall: 7

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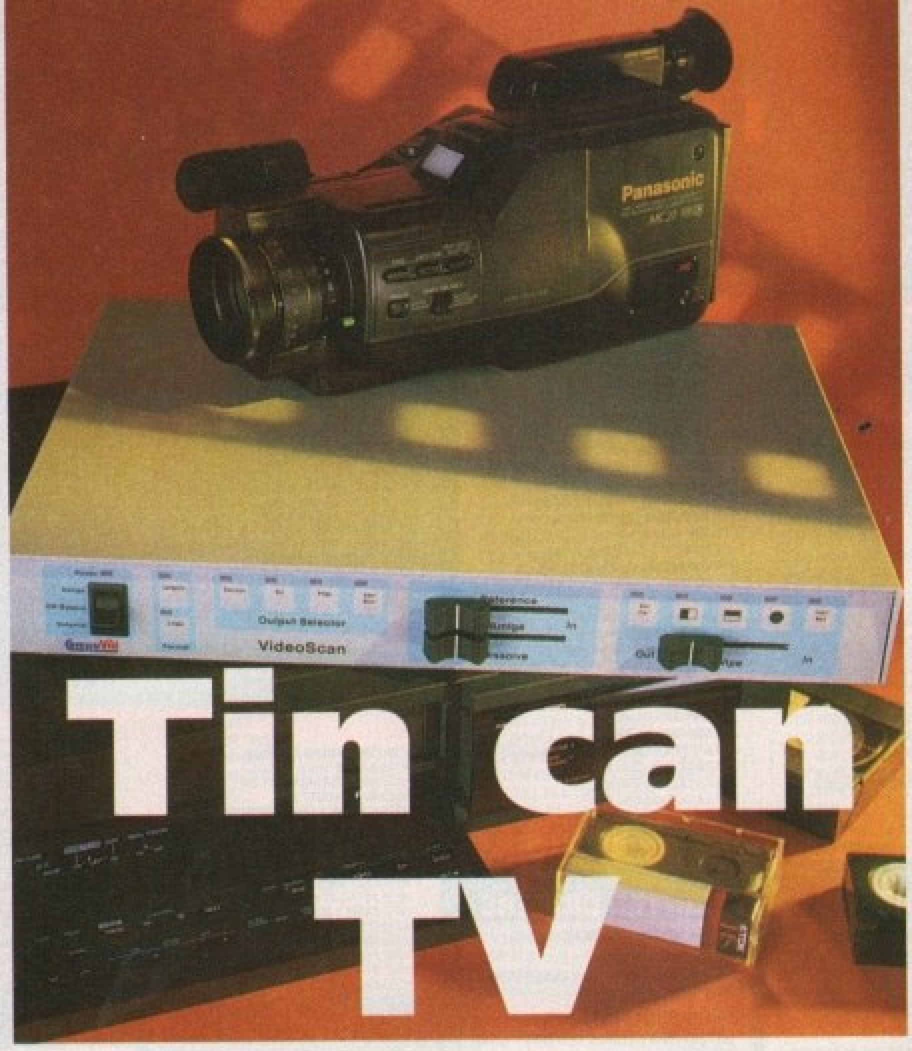
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The show is taking place at Bingley Hall, Staffordshire Showground, Weston Road, Stafford. You'll find it off the A518 Stafford-Uttoxeter Road. It will be AA signposted from Junction 14 of the M6.

You'll find Amiga Computing at the **Spring All Micro Show** in Stafford on Saturday April 16.



Tin can TV

Paul Austin examines the latest in Amiga videography as VideoScan arrives on the scene

As you can see from the price, VideoScan is definitely a pro product which justifies the additional investment courtesy of several power features such as video mixing and automated transitions – the like of which haven't been available since the demise of Progressive Peripherals and their VideoBlender.

Although the VideoBlender was primarily software controlled, VideoScan is entirely hardware based. However if you ignore the control differences both products are surprisingly similar.

Like the VideoBlender, VideoScan offers the simultaneous input and mixing of two video signals, S-VHS and VHS transcoding, plus the usual selection of key combinations providing graphic overlays and dissolves.

Better still, transition between the various states is given added glamour via a built-in special effects generator which provides horizontal, vertical, circular and inverted wipes either singly or in combination.

As you can see from the photography, combining and fading between the various signals is handled by assorted faders on the front panel of the unit.

However thanks to the special effects, hardware control is supplemented by an automatic fade option which applies the effect/s for you at a predefined speed.

Fortunately the designers have added the ability set the automatic transition speed manually. But the necessary adjuster is situated in a recess on the side of the unit so adjustment on the fly isn't really on the cards.

Due to the entirely hardware-based control system, actually setting it up is very straightforward. Like all genlocks its primary concern is connection to the Amiga's 23-pin RGB out.

Once safely plugged-in you simply select the Amiga as the power source via a small flip switch which toggles between bypass or off, Amiga, and external.

The external option requires a standalone power supply which isn't included. However this shouldn't be necessary unless you're running a smaller, heavily expanded machine.

Aside from the Amiga's RGB and power, the only other essential is at least one Video In. In this state you have a basic genlock setup which with the assistance of the faders can produce all the standard genlock effects for titling, animated logos and dissolves – either full or partial – between the video and computer signals.

In order to generate the required combination you simple select composite or S-VHS input and choose Key on the output control panel. Now if you move to the dissolve faders the signals can be combined as required. If your aspirations stretch to more exotic effects you'll require the assistance of a second video input. Once installed you horizons expand considerably with access to all the output options – sole output of the first or reference video, Amiga only output, or a combination of the video and Amiga output.

However most important of all is the fourth option which enables you to mix directly between the two incoming video signals. In this state the dissolve faders and mixing effects apply to the two video signals rather than the genlocked combination of Amiga and Video 1. AC



Excellent keying quality in composite and S-VHS



Multiple mixing effects ready and waiting, all you need is a time-base corrector

Input and output

As you've probably gathered VideoScan isn't exactly short in the I/O department. As mentioned both composite and S-VHS are supported on all Video ins and outputs via high quality BNCs and S-VHS mini DINs.

In addition the ability to transcode between S-VHS and composite – allowing a composite input to be combined with Amiga graphics and output as S-VHS, or vice versa is pretty impressive.

Monitoring the various signals is always important and here again VideoScan scores well with both VGA and med-res monitor ports for the Amiga display, in addition composite and S-VHS loops provide separate monitoring of the Video 1 input signal if required.

Add to that a separate key I/O connector which will accept or supply a key signal to or from an external video system and you have a very comprehensive videographic environment suitable for amateurs and professionals alike.

Mixing musts

Unfortunately combining both video signals isn't as straightforward as just plugging a composite or Y/C cable into the second Video In.

In order to initiate mixing, both video signals must first be passed through an external video mixer or TBC (time-based corrector). Unfortunately both methods require heavy additional investment which in the case of a TBC will leave little change out of £800.

Assuming you have the necessary hardware, connection becomes slightly more involved with either the composite or S-VHS signals connecting to video 1 as normal.

However the signal must then be passed onto the TBC via the loop output option. At the same time the second video signal is passed to the TBC directly. The two are then combined and passed onto the Video 2 input.

If all's well you should be able to dissolve and mix between the two signals using the same faders and mixing effects as previously employed during basic genlocking operations.

The only limitation in the mixing department is the inability of VideoScan to transcode when mixing.

The bottom line

Basically a quality pro product that does a great job of filling a gap left with the demise of the VideoBlender. As the price and features imply this isn't meant for the home market, but if you're a serious or semi-pro videographer it's a relatively cheap introduction to high-end production methods and effects.

Supplier: CompuVid Inc
Tel: 0101 305 448 0839
Price: TBA
Value for money: n/a

GAMES

- MEGABALL Breakout – very addictive
- STAR TREK I (2 disks) Space
- CASTLE OF DOOM Adventure
- HOLY GRAIL Text only adventure
- GOLDEN FLEECE Text only adventure
- CARD GAMES Harp, Plait, Queens etc
- SUPER TWINTRIS Shape dropping excellent
- GAMES DISK 7 Backgammon etc
- WIZZYS QUEST * Arcade puzzle, good graphix
- RETURN TO EARTH Elite type
- LLAMATRON 512K & 1Mb Shoot 'em up
- BUG BASH Shoot 'em up
- ESCAPE FROM JOVI Space Arcade
- DOWNHILL CHALLENGE Tactics, ski to win
- BATTLEFORCE Fantasy roll playing game
- DRAGON CAVE Dungeon Master type
- MECHFIGHT RPG Roll playing game
- GREYSLAYER Arcade adventure
- SCUM EATERS Shoot 'em up
- STAR TREK 2 (3 disks)Not 1200
- POM POM GUNNER * Arcade shoot 'em up
- FRUIT MACHINE * Excellent
- MECHFORCE (2 Disks) RPG
- SEA LANCE * Submarine Simulation
- KLONDIKE Cards
- AIR ACE II World War 2 S.E.U.
- MERV THE MERCILESS Platform
- TREASURE HUNT (6-8 yrs)
- CHEAT LIST GAMES V1.0
- WHACKO JNR IN WONDERLAND Good for kids
- PARACHUTE JOUST Good graphics
- CRYSTAL CAVERNS Arcade adv
- TREK-73 Space text adv
- ZEUS – THE GAME Puzz tiles
- DUNGEON DELVER (2 Disks) Mazes
- PICK UP A PUZZLE * (2 Disks) Jigsaws
- CHAINSAW DEATH * Futuristic maze type
- CAN YOU PICTURE IT * (2 Disks) Jigsaw
- CROSSFIRE * Excellent for kids
- BALLOONACY * Bomb the skyscrapers
- DEMOLISION MISSION * Bomber
- BLACKJACK Card game
- PETER'S QUEST Arcade –Rescue the Maiden
- AMIGAMAN GAMES 10 games
- SHAPES Very playable for kids
- GO LOOLY S.E.U. Good graphix
- STAR TREK THE NEXT GENERATION
- BLOCKIT Good graphix – Ace
- G94 **HACK** Text adv
- G95 **DRAGON TILES** Great tiles game
- G96 **BOARD GAMES**
- G97 **ATIK ATAK** C64 game
- G99 **BART SIMPSON** Scrolling S.E.U.
- G124 **PIPE RIDER** Space Invader S.E.U
- G125 **RAMIFY** Pairing
- G126 **RUSH HOUR** Frogger – Get across the road
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- G129 **WET BEAVER GAMES** Pong
- G130 **WIZARD WORLD** S.E.U. Platform
- G131 **WORLD OF FOOLS** Shoot em up
- G133 **CARD SHARP** 5 card games
- G134 **TOTAL WAR** Risk type
- G135 **AIRMANIA** Platform
- G136 **SKYFLYER** WWII S.E.U.
- G137 **PUGGLES** Q'bert brill
- G138 **SQUATS REVENGE** Wolf clone
- G139 **PAIR IT** Shapes
- G140 **GAMES COMPILATION I** 6 games
- G141 **ATLANTIS I** Strategy
- G142 **NAPOLEONIC WAR SIMULATION** Strategy
- G143 **MISSION RAID PART II** S.E.U.
- G144 **SNAKES & LADDERS** Good
- G145 **GAMES GALORE VOL 7** For the young
- G146 **AIR WARRIOR** Flight simulation
- G151 **E-TYPE** Arcade S.E.U.
- G152 **DUNGEONS OF NADROJ** Hacktype
- G153 **QUICK & SILVER** Platform. Excellent
- G154 **MASTER OF THE TOWN** Shoot the sign posts
- G156 **ETHOS** Text adv + pics
- G157 **BATTLE CARS** 3D cars S.E.U.
- G158 **CHALLENGER** Quiz - 5 player
- G182 **CATACOMB** Graphic adv – very well done
- G183 **KINGDOM AT WAR** War games
- G184 **SMASH TV RIPOFF** S.E.U. Futuristic
- G185 **DOODY** Mario type platform
- G186 **PICK OUT** Pair it. V. good
- G187 **NU-SHOOT EM UP** Space
- G189 **STRIKE BALL** Baseball. Brill!
- G190 **PARAGON** Marble Slide
- G192 **CRAZY SUE** Platform. 1st rate
- G193 **HENRY IN PANIC** Manic Miner type
- G194 **CONCENTRATION V3.3** Pair it type
- G195 **DESTINATION MOONBASE** Thrust
- G196 **ESCAPE FROM JOVI III** Caves
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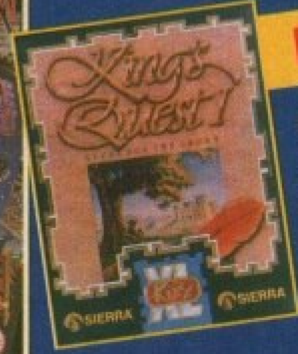
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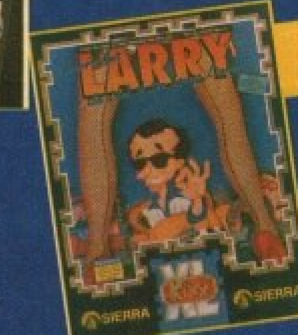
You must state on your card if you do not wish to receive promotional material from other companies. The closing date is April 30.

Result information may be obtained by writing to our offices. No cash alternative to the prize is available. The editors decision is final. No correspondence will be entered into.



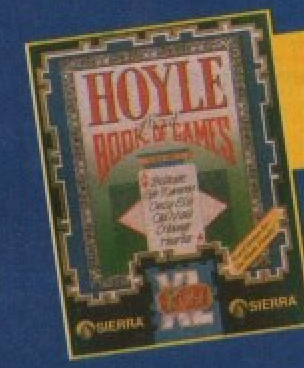
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DEMOS
...Mental Hangover
...Intercepter Demo
...Wild Copper
...17Bit Music Demos
...World Demos 21
...Total Remix*Demo
...14/15...Predators(2)
...20/21...Red Sector(2)
...24/25...New Tek Reel3(2)
...Total Remix 2 Demo
...T.V. Theme
...Epic Demo
...P.D. Collection
...Virtual Worlds
...Vectra Sinking Demo
...TFF Demo Voyage
...Safy Demo
...Video Effects 3D
...Cult Vector Dance 2
...Phenomena Demo
...Amos 3D Demo
...A Trip To Mars
...A2000 GenlockDemo
...81/82...Budbrain 1 (2)
...Budbrain 2
...Crionics Neverwhere
...pirhana demo
...Alcatraz M/Demo 3
...A Chaplin Demo
...Total Destruction
...Mr B Demo Comp 4
...Walter S.T. Demos
...Defcon 1
...Aurora M/Demo
...Cult M/Demo 2
...Precise Demo
...Fasination
...Goldfire Megademo
...137/138..So What (2)
...Devils"No Reality"
...The Silents "Ice"
...Crystal Symphonies
...Ray Of Hope 2
...No Brain No Pain
...158/159.Cyborg Demo(2)
...Coaxial Comp
...MC Disk 1 Coma
...End Of Century 1999
...Dreamers 3
...Avengers M/Demo
...216/217..Bass o Matic (2)
...Disorder Demo
...Tuff Enuff
...Cool Fridge Demo
...Hardcrack M/Demo
...Hypnautic Hammer
...Six Of One Demo
...Planetside
...Lemmings Revenge
...Total Respray
...Budrain 3
...Phenomena Inerspace
...Total Retrial
...Pulling The Trigger
...CES Demos
...Total Recount
...Total Rebate
...Spasmolytic
...D-Mob M/Demo
...Sun Connection 2
...Kefrons The Wall
...Timex Hydra
...Electric Demos 1
...Defpackers Demo
...Cave La Weird
...Iraqui Demo
...280/281..Delerious (2)
...L.S.D. Demo
...Devils Colours
...Trakmo
...The Groove Ramjam
...325/326..Real Empathy(2)
...328/329..Red Dwarf (2)
...Darkness M/Demo
...Melted Experience
...333-337..Odyssey (5)
...Watchman Demo
...Anarchy Smoker Co
...Ed 209 The Revenge
...343/344..Hardwired (2)
...Wildfire M/Demo
...Mindwarp M/Demo
...348/349..Skizzo Demo(2)
...350-352..Treacle Team(3)
...Mr Men Stories
...Seeing Is Believing
...State Of The Art
...Mayday Resistance
...362/363..Jesus On E's (2)
...Fish Tank
...Optimum Pressure
...Mind Riot
...InThe Can Demo
...Dynamic Illusions
...Piece Of Mind
...3D Demo 2
...Lethal Exit
...World of Commodore
...Claustraphobia
...Hoover Demo
...The Trip
...382/3...Project Techno (2)
...Interspace
...Mindwarp (AGA)
...Panta Rhei (AGA)
...Hysteria
...393-5...Grapevine 15 (3)
...396-8...Grapevine 16 (3)
...399-401...Grapevine 17 (3)
...402...In The Kitchen

UTILITIES
U1...Games Music Creator
U21...The Comms Disk
U32...Modem Utils
U34...Red Devils Utils 1
U35...Soundtracker Special
U38...Paint,Music,Media
U39...Card Designer
U41...Red Devils Utils 4
U43...Future Composer
U44...Kefrons Makeboot
U45...P.E Giant Utils 168
U47...Label Designer
U49...Ultimate Icon Disk
U50...Power Comp Utils
U51...Jazz Bench
U55...Visicalc
U57...Quickbench
U59...Font Designer
U60...D-Paint Fonts 1
U61...D-Paint Fonts 2
U62...Med 3.20
U63...Direct Anim Creator
U64...Crossword Designer
U66...CLI Help + Others
U67...S/Tracker Mega
U68...Ultimate Boots 1
U69...Ultimate Boots 2
U73...Powerlogo
U74...M-Cad
U75...Journal Home Acc's
U76...Home Utilities
U77...Electrocad
U78...Ami Base
U81...Bootbench V2.0
U82...Slideshow Maker
U83...Catalog Workshop 1
U84...Catalog Workshop 2
U87...Hard Disk Utils
U89-94...Amateur Radio (6)
U95...C-Light + Others
U96...GFX Utils 1
U100...Ham Lab
U101...Sid V2.0
U108...A-Gene
U113...Midi Utilities
U118/119...Video Utils (2)
U132...GFX Utils 2
U133/134...North C (2)
U136...CrossDoss (demo)
U138...Squid Squad Utils
U139...Terminalities V1.0
U140...Squash 1 (2.04 only)
U141...Squash 2 (2.04 only)
U142...Text Plus 3
U144...Dennis Samples 1
U145...Digital Intro Design
U146...Viz Clip Art
U147...Spectrum Emulator
U151...Slipstream V/Killers
U152...Red Devils Utils 6
U154...Amigafox W/P
U155...P.D Utils Docs Disk
U163...Quickbench + (2.04)
U164...Rim Database
U166...Dennis's Hack Disk
U167...Demolisher Utils
U168...Home Business 3
U172...Squelch (1.3 only)
U176...GFX Utils 3
U177...Star Charts
U179-180...Dice (2)
U181...Celtic Demo Maker
U186-206...Track Ins 10-30
U207...Icon Collection 1
U208...Dave Jones Fonts 1
U211...Chemesthetics
U212...Animated Pointers
U213...Desk Top Publisher
U215...Messy Sid 2
U216...Master V/Killer 2.2
U218...Data Base Wizard
U223...Ten Pin Data Base
U224...Q-Base Data Base
U226...Games Solutions 1
U231...D-Paint Fonts 3
U235...Ami Cash V1
U238...Iconmania
U240...Icon Editor
U252...Opticomms 2.0
U254...New Superkillers 2
U255...Protracker v2.0
U256...Atari ST Emulator
U258...D-Copy 3
U262...PC Emulator
U273...Vidi Fonts 1
U274...Illinoi Labels
U275...600 Business letters
U279...Invoice Printer
U283...Headline Fonts
U289...Amos Updater
U290...Kickstart 2.0
U293...Black Tiger Utils 2
U294...Text Engine V4.0
U296...Ultimate Disk Crea
U297...10 PD Copiers
U298...Protracker V3.0
U299...Address Print V3.1
U303...Game Tamer
U308...Music Base V1
U309...PP Minicrunch
U311...Vmorph V2.30
U313...Pro Astrology
U314...Pools Wizard Jr
U319...Lister V2.1
U320...Garden Designer
U327...Bezier Surf
U329...Music Engine V3.4
U330...Starview
U331...X-Beat Pro
U332...Superview V2.4

GAMES
G1...Return To Earth
G2...Games comp 5
G3...Dizzy Lizzy
G4...Scum Haters
G5...Parachute Joust
G6...Frantic Freddie
G8...Twintris
G9...Psuedo Cop
G10...Drip
G11...Bug Bash
G12...Asteroids
G13...LLamatron
G14...Escape From Jovi
G15...Moria Adventure
G16...Ground Attack
G17...Megaball
G18...Insiders Club
G19...Various Adventures
G20...Battleforce
G22...Dragon Cave
G24...Rings Of Zon
G25...Mayhem
G26...Mechflight
G27...The Tennis Game
G28...Flaschbier
G29...Buck Rogers
G30...Greyslayer
G31...7-Tiles
G32...Mega Comp 1
G33-34...Star Trek 1 (2)
G35-37...Star Trek 2 (3)
G38-39...Mechforce (2)
G40...Klondyke
G42...Car
G43...Games Comp 2
G44...S.E.U.C.K. Games
G45...Sacc Games Comp
G46...Games Comp 3
G48...Rays Game Disk
G49...Games Comp 4
G50...Games Comp 6
G51-52...Trucking (2)
G53...Jetpac
G55...Quick And Silva
G56...Miniblast
G57...Lamer Game
G58...Games comp 7
G59...Games comp 8
G60...Pom Pom Gunner
G61...Caverunner
G62...Crystal Caverns
G63...Intact
G64...Eternal Rome
G65...Lemmingoids
G66...DownHill Challenge
G67...Lame ST Ports
G68...Paranoid
G69...Puggles
G70...Chainsaw Death
G71...Pirate Pete's Treasure
G72...Serene 2
G73...Castles
G74...Dynamite Dick
G75...Card Games 1
G76...Wizzy's Quest
G77...Growth
G78...Skate
G79...Atic Atac
G80...Napoleonic Sim
G81...Project 1
G82...Lazer Zone
G83...Lemmings Pack
G84...Star Trek S.E.UP
G85...Lettrix
G87...Matched Pairs
G89...Snake Pit
G90...Zeus
G92...Blizzard
G93...The Maze Game
G94...Subculture
G95...Hollywood Trivia
G97...Shootout
G99...Holy Grail Adventure
G100...Amos Coindrop
G101...Classic Comp 1
G102...Card Games 2
G103...Super Skoda Chall
G104...Grand Prix Sim
G106...Computer Conflict 2
G107...Mission X Raid 2
G108...NU Game
G110...Tricky + The Turn
G111...Marble Slide
G112...Games Comp 10
G113...Black Jack Lab
G114...Dungeon Of Madroj
G115...Amiga Columns
G116...Robocop In Iraq
G117...Mutant Camels
G120-122...Warlock (3)
G124...Bart Simpson
G126...Air Ace 2
G127...Breakout Con Kit
G128...Pipeline
G129...Dung Of Doridian
G132...Peters Quest
G133...Star Trek 3
G134...Piperider
G139...Door To Door
G143...Solid Quad
G144...Omega Race
G145...Mission X Raid 3
G146...Trek 73
G147...Wack In Wonderland
G148...Squats Revenge
G149...Sky Fight
G150...Wet Beaver
G151...Airmania
G152...Wizard World
G154...Totally Frantic Quiz
G155...Chess V2.0
G156...Smash Telly
G159...Billy The Dragon
G160...I-Ching
G161...E-Type
G162...TomCat
G163...Sea Lance
G164...Dizzy Diamonds
G165...No Mans Land
G166...Word Square Solver
G167...Cross Fire
G168...Wastelands
G170...Space Blitz
G171...Crazy Sue
G172...Make A Break
G173...Squamble
G174...F-1 Challenge
G175...Othello
G178...Evil Dead Game
G179...Trainset
G180-181...P Comps 1+2
G182...Diplomacy
G183...Tractor Beam
G184...Motor Duel
G185...Game Boy Tetris 2
G186...Water Works
G187...Act Of War
G188...Mutants Games
G189-193...Timelords 1-5
G194...Nirvana
G195-196...Neighbours (2)
G197...Ameoba Invaders
G198...Game Boy Tetris 1
G199...Tetren
G200...Battlecars 2
G201...Dr Mario
G204...Ashido
G205...Cheats Disk 2
G206...Cheats Disk 3
G208...Airport
G209...F.R.A.C.
G210...The Golden Fleece
G211...Legend of Lothian
G212-214...Timelords 6-8
G215...Amos Games 1
G216...Super Sid
G217...Light Bikes
G218...Relayer
G219...Air Hockey
G220...Amos Child Quiz
G221...Texas Chainsaw
G222...Roulette
G223...Premier Pics
G224...Thrust Duel
G225...Wibble Giddy
G226...Super Pong
G227...Fruit Salad
G228...Brainbow
G229...Jeopard
G230...Space Invasion
G231...Karate Worm
G232...Super League Manager
G233...PD City Comp 1
G234...Colour Changes
G235...Battle Of Britain
G236...Super Twintri
G237...Castle
G238...Numtris (+ Only)
G239...Kung Fu Charles
G242...Micro Market
G243...Bload Runner

SLIDES
S1...Ham Pics Show 1
S4...Madonna slides
S5...Moviestar slides
S6...Party Disaster
S8...Immaculate Collection
S9...Simpsons Slides
S10-11...Channel 42 (2)
S12...Bruce Lee Slides
S14...Adams Family
S15...Viz Mag Slides
S17...Docklands Jarre
S18...Dr Who Demo
S20...Nasa Slides
S22-24...WWF Slides (3)
S27...Demons Slides
S28...Total Recall
S29...Joe's Slides
S30...Ham Pics Show 2
S32...Neighbours Slides
S33...Roger Dean slides
S34...Iron Maiden Slides
S35-36...Tobias Richter (2)
S38...Basket case 2
S39...Eces Slides
S40...Fraxion Devine 2
S41...Fraxion Devine 1
S42...Golems Gate Slides
S43...Chainsaw Slippers
S44...Cry For Dawn
S45...Forgotton Realms (2)
S47...Kick Off 3 Slides
S48...PD Slideshow
S49-52...Terminator (4)
S53...Robocop 2 Slides
S54...Trackmaster Slides
S55...Forgotton Realms 2
S56...Garfield Slides
S57...Pawnbroker Slides
S58...Hellraiser Slides
S59...Night Breed Slides
S60...Raytracing
S61...Horror Slides
S70...Muscle Mania
S71...Creature Comforts
S72...The Wonder Years
S73...Watership Down
S75...Ferrari 348 Pics
S76...Belinda Carlisle
S77...Cher Slides
S79...Freddies Dead
S80...Wendy James Slides
S81...The Invisible World
S82-83...Terminator 2 (2)
S84...Fantasy Pics
S85...Gulf War Slides
S86...Magical Pics
S88...Gulf War Tribute
S89-90...S/Thing Fishy (2)
S91...Eldorado Slides

ANIMS
A1...Probe Sequence
A2...Ghost Pool
A3...Jogger + Magician 1
A4...Gymnast Demo
A5...Fractal Flight
A6...Basketball Demo
A8...Walker Demo
A9...Magician 2
A10...Pugs In Space
A11...Luxor Teenager
A13...Juggler Demo
A16...Cool Cougar
A17...Mono Cycle Anim
A18...Robocop Anim
A20...Mayhem On Wheels
A21...Jugette 2
A22...Shuttlecock Anim
A23...T-Pot Anim
A27...Fleet Manouvre
A28...Billiard Anim
A29...E/Prise Leaves Dock
A30...Starwars 2 Anim
A31...Star Trek Anim
A32...Fraxion revenge
A34...Madonna Anim
A35...Stealthy Anims 2
A36...Raiders Of The L/Ark
A37...Bugs Bunny Show
A38...Iraq V's UK Anim
A39...Mike Tyson anim
A42...Walker 2
A43...Walker 3
A45-46...Light Cycle (2)
A47...Exploding Head
A48...Police Car Chase
A49...Top Gun Demo
A50...Animators Demo
A51...5 Ways To Kill a Mole
A52...Another 5 Ways
A53...Batman The movie
A54...3D Spaceship
A55...Mr Potato Head
A59...Low Level Flight
A63...Amy V's Walker
A64...Real Pinball Anim
A66...Porky Pig Anim
A67...Adventures Of Chuck
A70-71...Max Overdrive (2)
A73...Spaceshuttle Anim
A74...Ghostbusters + Horse
A76...Alarm Anim
A77...Flight Anim
A78...Piano Anim
A79...Dart Anim
A80...Bad Bird Anim
A81...Holiday Anim
A82...Fillet The Fish
A85...Miners Anim
A86...Pocket Watch Anim
A90-93...The Movies 2 (4)
A95...My TinToy
A96...T-Pot 2 Anim
A99...Terminator 3
A100...Dolphin Dreams
A101/102...Thunderbirds (2)
A103...History of Amy
A104...Pogo Anim (2 Meg)

EDUCATION
E1...Education Pack 1
E2...Education Pack 2
E3...Education Pack 3
E4...Education Pack 4
E5...Education Pack 5
E6...Education Pack 6
E7...Educational Worlds 1
E8...Educational Games
E9...Math Drill
E10...Amiga Function Com
E11...Devware Ed Comp
E12...Simon Says + S Maths
E13...Kids Paint
E14...Storyland 2
E15...Colour It
E16...Colour The Alphabet
E17...D.T.P. For Children
E18...Algebra
E19...Amosagram
E20...Animal Land!
E21...Animal Sounds
E22...Military War Sounds
E23...Vehicles Sounds
E24/25...Read & Learn 1 (2)
E26...Junior Maths

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CLU18 LC200 FONTS Different fonts for your LC200 Printer. 1 disk £3.50
CLU19 LC24FONTS Different fonts for your LC24 Printer. 1 disk £3.50
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CLU24 RED LOTUS ANIMBRUSHES More anim brushes for paint packages. 1 disk £3.50
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CLG14 SONIC SMARTIEHEAD Another platform style game. 1 disk £3.50
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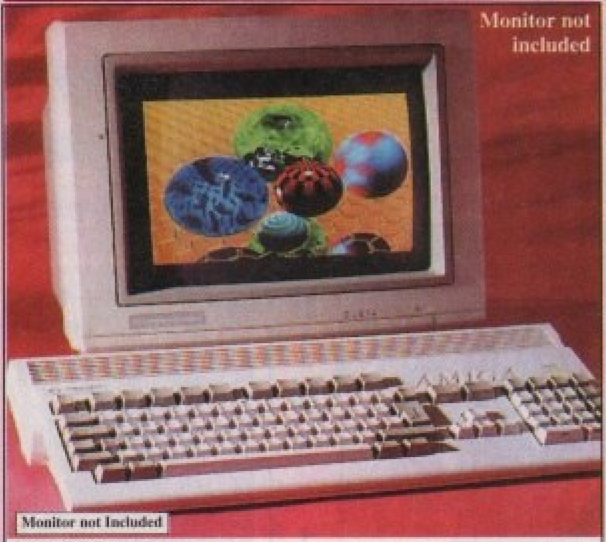
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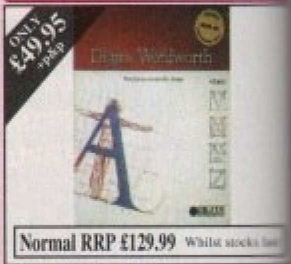
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Inside the Shell

Adam Phillips reports on some of the more unseen features tucked away deep in the heart of the Amiga 1200



With half a dozen titles or so installed in your hard drive, the public domain market has paid off dividends in the saving cash department.

There's only one problem – some of the disks won't actually run even when installed, no matter how much you assign them. Turning to the trusty pages of *Amiga Computing*, you continue your quest for learning and understanding...

There's a wealth of games and utilities out there in the public sector that unfortunately require a little more work than just assigning the files to the hard drive.

With all the files installed in their own drawer and the assign lines written, there are still problems that may arise. The simple fact is that there can be certain essential system files on the original disk that haven't transferred over and need to be done manually.

WORTHWHILE

To make the next process easier on yourself and for future disk and directory management, it's a worthwhile investment to buy a disk and directory manager that will help you sort and transfer files between different directories (as in hard drive, floppy and optical, but I'll save that explanation for a later date...).

You can pick one of these up from most reputable PD libraries for a very reasonable price and if, like us in the office, you want the best then Directory Opus is an ideal choice.

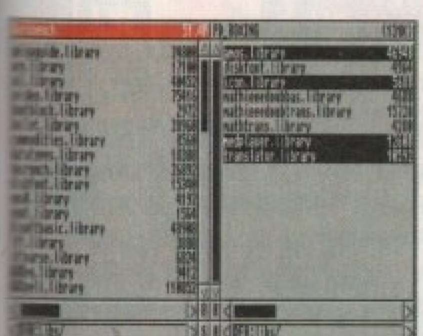
In this example, we'll being using the aforementioned package but the same rules apply to any comprehensive utility of this sort. Slip the original disk of the software that is refusing to boot up into the disk drive and then proceed to boot up the disk manager.

List the contents of the disk and then bring up the contents of the hard drive in the root (main) directory that contains the drawers named C, Devs, L, Libs and S.

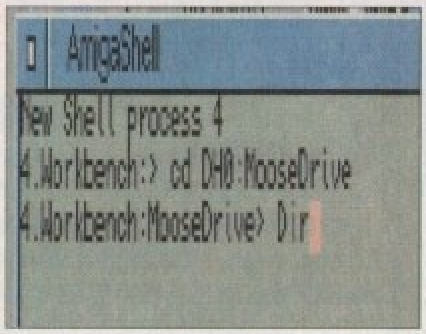
Don't panic, these simply contain certain files for running the various programs already on the hard drive. Once both have been brought up, first of all compare their Libs files.

As with all the drawers (Devs and the like), certain files may be present on the original disk that aren't on the hard disk. This can easily be rectified by copying the file across to the matching drawer and thereby installing it. It's usual for many games to have particular libraries essential to their operation and without them, they won't run. If this doesn't work then it's a case of ploughing through the other drawers looking for the differences.

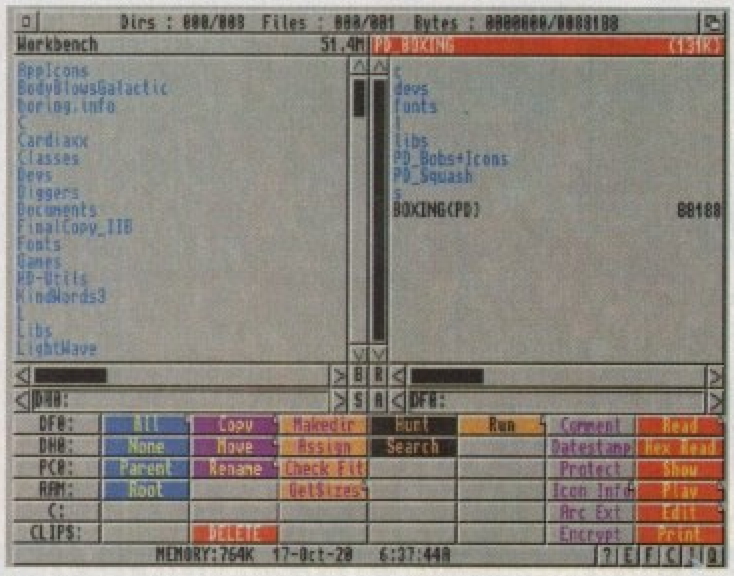
You can avoid a potentially disastrous situation by making sure that you never replace the same file with what seems to be another identical file if you decide to move a large section across.



The comparison of the drawer Libs between the two – note that there are a few files missing from the DH0 side. Time to transfer the originals across...



Type these lines into Shell to see if you can find the right command to boot the software up... use the spacebar to pause the ensuing lists



Directory Opus in all its glory... on the left the contents of DH0 and on the right, the original floppy contents

WORKBENCH

Some of these seemingly identical files are in fact written for earlier versions of Workbench and if put in place of the correct one, could seriously mess up other programs that already work quite successfully as they are.

After all this is done and you've reset the machine, try clicking on the game or utility icon to see if it now boots in with all the files in place. If the pesky little sucker still insists on not budging then it may well only be possible to boot up from Shell – move your pointer over to the Shell icon and open it up.

Type in CD DH0 (The dh0 refers to the volume where the game or utility is stored); and DRAWER (which drawer the software is in) and hit the return key.

Type in DIR (directory) and the contents of the drawer will be listed. Look for a file name that appears as if it could be executable (as in run) such as RUN GAME. Once spotted, simply type it in and the software should at last boot up ready for you to play or use to your hearts content.

If you're having problems identifying the required file, type in ed DH0:s/startup-sequence and look through which files the computer needs to get the program going.

Finally, when exiting Shell, don't save what you've done – it's not necessary to. Simply hold the right mouse down and go to the pull-down menus at the top of the screen. Select Quit and you'll exist Shell without saving anything you shouldn't just in case you accidentally hit a few wrong keys. After that, fingers crossed and away you go ...

AC

Disk managers

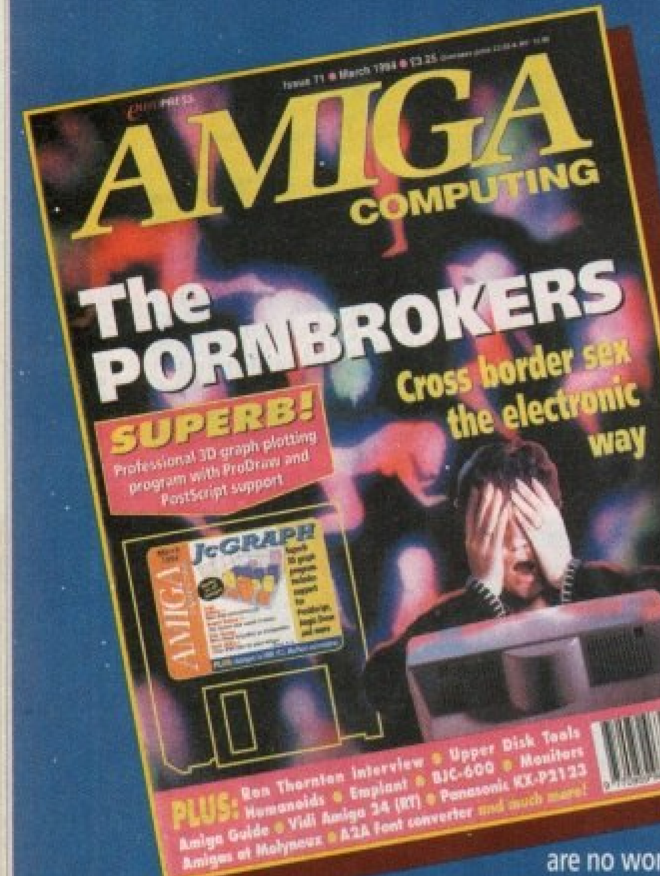
Vital for real filing power, these highly useful titles are a life-saver in terms of time and ease of use by simply giving the user the opportunity to use options such as comparing files, copying, deleting and searching amongst many other features.

Directory Opus v4.1
Approx. £60
The king of the castle and still reigning supreme on the Amiga as the best money can buy.

Disk Manager
Approx. £30
An average and relatively useful management system.

SID II
Approx. £2 from any good PD outlet
Ideal for beginners boasting a series of features only bettered by Directory Opus. See how you go with this and if more power is needed, upgrade to Opus. Recommended.

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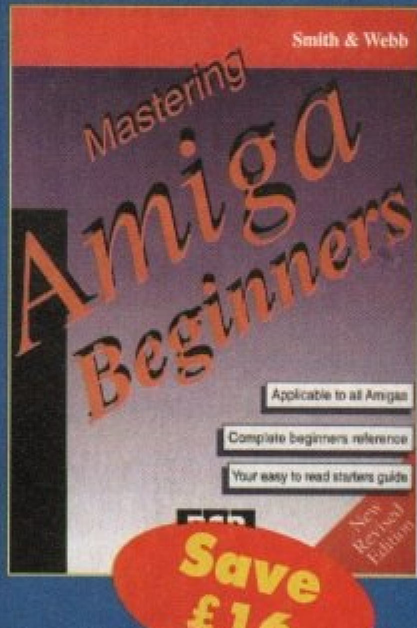


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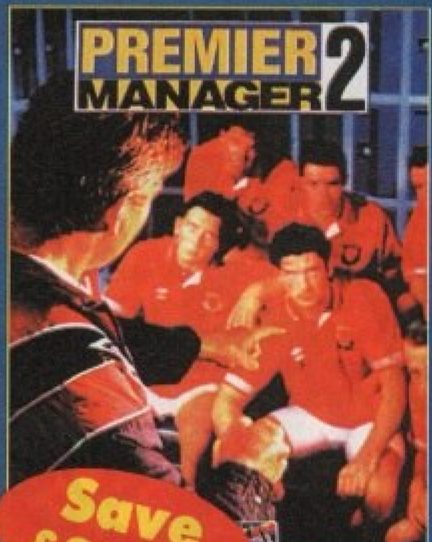
This superb book includes coverage of the A1200 and A600, Workbench familiarity, preferences, utilities, beginners AmigaDOS, programming, fonts, printers, graphics, music and sound, public domain, viruses, upgrading, comms, desktop video, multimedia and much, much more.



Save £16

Premier Manager 2

This is the latest football management sim from Gremlin. Following on from its predecessor, Premier Manager 2 takes the whole football management scenario one stage further, and although more complex than the first version, loses none of the addictive appeal which made it the success it was.



Save £25.99

Well, I have had over 100 disks sent to me for review just for this issue! So anyone out there who recently invested in an A1200 and is constantly being told by spotty, "sponsored" salesman in your high street tech stores that consoles are the future, don't worry because I have a feeling that the Amiga is here to stay for quite some time...



PUBLIC SECTOR

Adam Phillips dissects the echelons of the PD that other magazines can't reach in this month's round-up of the good, the bad and the hideously ugly...

D-Day

Programmed by: AM Cooke

Available from: AM Cooke

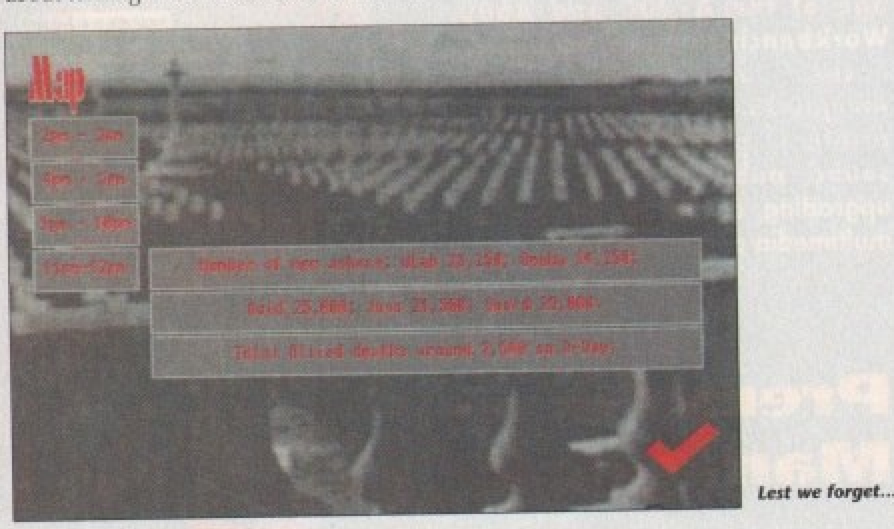
With Schindler's List on the way, the topic of the world wears and their remembrance, or more so how they should be remembered, has raised certain questions about turning what was an horrific time in world history into entertainment.

One thing that has always struck me about the PD are the various educational packages that handle this kind of material with an intelligence and responsibility that informs and keeps the events that lost millions of lives in perspective.

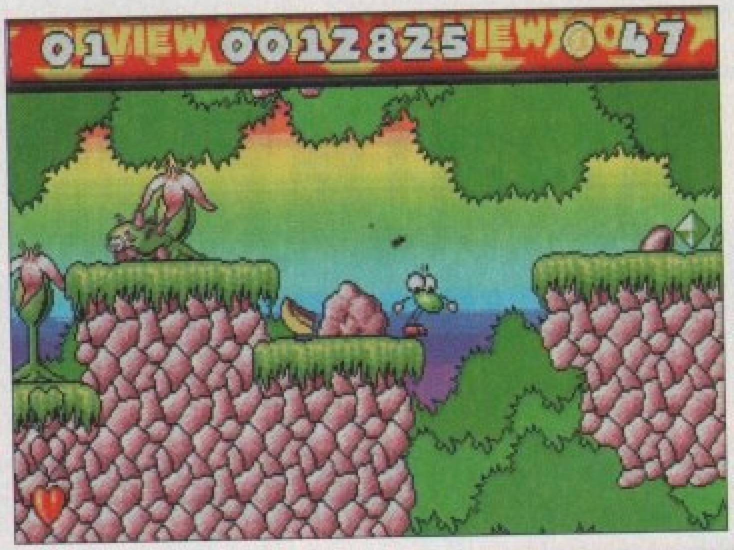
D-Day is a Hypertext-created guide to the famous day when the Allies landed on the shores of Normandy to drive the Germans back.

Presented in a series of menus, the user is able to access information on the Allies, the Nazis and the event itself. Using text and maps, these categories are split down further into more options to give a solid overview of the battle where 2,500 Allies lost their lives.

Ideal for students wanting to find out more on the subject in a simple, easy-to-use package, D-Day is another title that explains instead of exploiting.



Lest we forget...



Boasting highly attractive graphics, Morton Strikes Back's only problem is lack of long-term challenge

Morton Strikes Back

Programmed by: David Parsons

Available from: David Parsons

Colourful, well-defined graphics are the first thing to hit you when booting up Morton Strikes Back – a fun, professional-looking platformer program in the vein of James Pond.

Taking elements of jump-'em-ups from across the ages, Morton is a cute character with a large green nose, stick legs and arms and little else. The action revolves simply around leaping from platform to platform, grabbing coins and other such bonuses while trying to make it to the exit at the end of each level.

Along the way, various beasties in the shape of snakes, birds and other paraphernalia obstruct your path which can mostly be dispatched by jumping on their heads (ahh, that old chestnut).

The gameplay is addictive and fun and contains a fair challenge with sixty levels for your money set in different areas. With more power-ups and differing objects and a challenge that packed a hefty punch, this would be a PD classic because the presentation is very well done indeed.

As it stands though, Morton Strikes Back is a samey, albeit fun experience, ideal for younger children and adults alike.



Hit the ball at the wall and grab the power-ups as they drift down to receive a Brucey Bonus in Mega Ball, an AGA-only game

Mega Ball AGA

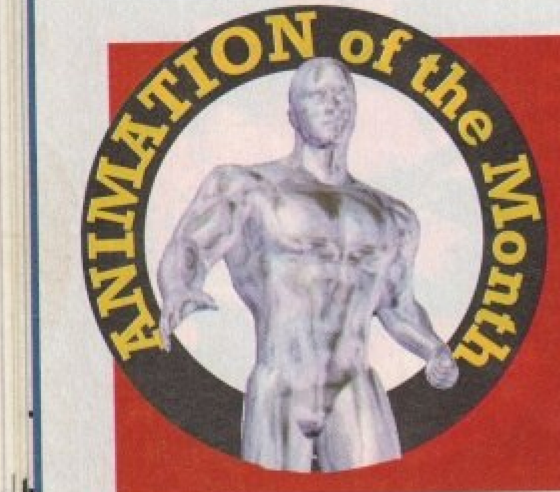
Programmed by: Ed Mackey

Available from: Kew=II • Disk No G1078

Breakout, eh? An old crusty dinosaur of a game which was huge in its day and then submerged back into the quagmire from whence it came.

Then, years in the making and after arcade companies had run out of any original ideas, the powers that be came out with the admittedly excellent Arkanoid – Breakout with knobs on.

The colourful graphics, speed and



Don't Go Down into the Cellar

Available from: PD Soft • Disk No 3509

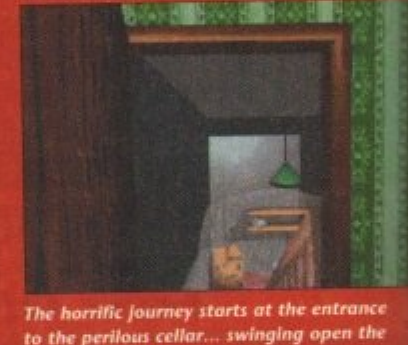
After last month's Commodore plug thanks to the ray-traced delights of Craig Collings's Mean CD Machine, I wasn't expecting to see such an ambitious animation for rather a long time.

As usual, I'm happy to eat my words with this offering from the US of A.

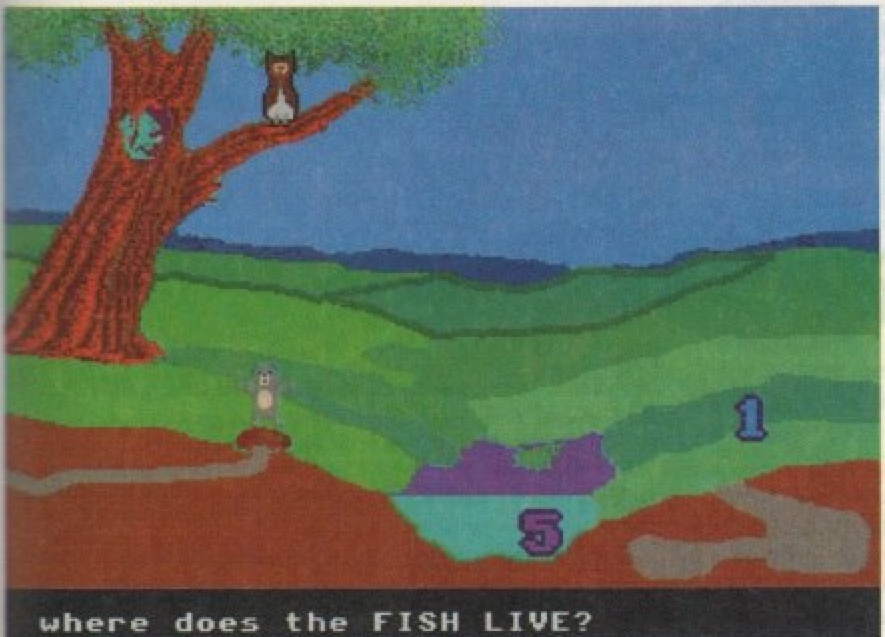
Coming on a substantial nine disks and requiring a mere 7Mb to run, this is a colourful anim about a short trip down into the cellar.

Seen from the point of view of the victim, we creep down the basement stairs and have a good poke around with horrific consequences. The end result is 15 seconds of 24-bit graphical excellence that, while lacking in the plot department, yet again shows what can be achieved with a high-end Amiga.

Don't go Dow



The horrific journey starts at the entrance to the perilous cellar... swinging open the door, you start your descent



A fun "edutainment" (I hate that word) program for the youthful among us

most importantly, the myriad of power-ups hidden elusively in the hovering blocks made the 2D original into a fully-fledged game.

Now, for your PD playing eyes only, comes Mega Ball, a clone of the aforementioned but with even more bits and pieces added.

Taking your robotic "bat", you have to knock a ball at various screens of blocks with the sole aim of destroying them and moving onto the next level.

Lasers, expansion kits, magnetic balls and many other power-ups drop from the skies, giving the player a better chance of proceeding in the game. Like the forefathers before it, Mega Ball is a fiendishly addictive title to while away a couple of hours with.

Mice are broken through fists slamming down onto them at high velocity and the promise of vengeance is oft sworn against the programmer for making what is a very simple, basic idea so enjoyable and bloody frustrating at the same time.

The only gripe is a little dodginess on behalf of the ball which flickers a little when hurtling around the screen, and the apparently inexplicable speed that it sometimes reaches for no apparent reason only to slow down a few moments later.

Otherwise, this little beauty is well worth the humble asking price and comes highly recommended to arcade action fans.

Animal Land

Programmed by: Mick Wilson

Available from: Mick Wilson

The key element to any educational package on a computer is that it has to be fun above anything else. No matter how much information is crammed onto one disk, if the proceedings aren't actually enjoyable to play then there is little hope for any toddler ever gleaning and retaining knowledge from the whole experience.

Animal Land is definitely fun to play and is presented as a series of logic problems. The user is presented with a landscape or farmyard and a series of numbers are dotted round the screen – one on a branch, the other in the pond and so on.

The computer asks in a flat and emotionless voice where a particular animal would be such as an owl. In this case, press the number that is on the right place on the screen. You'll then be told if you're right and the owl appears sitting on the branch.

After a couple of these scenarios, the program moves onto a memory test where the pupil has to remember which number corresponded to which animal. This is difficult but again useful for sharpening the young grey cells. Attracting an ➤

Worlds Beyond

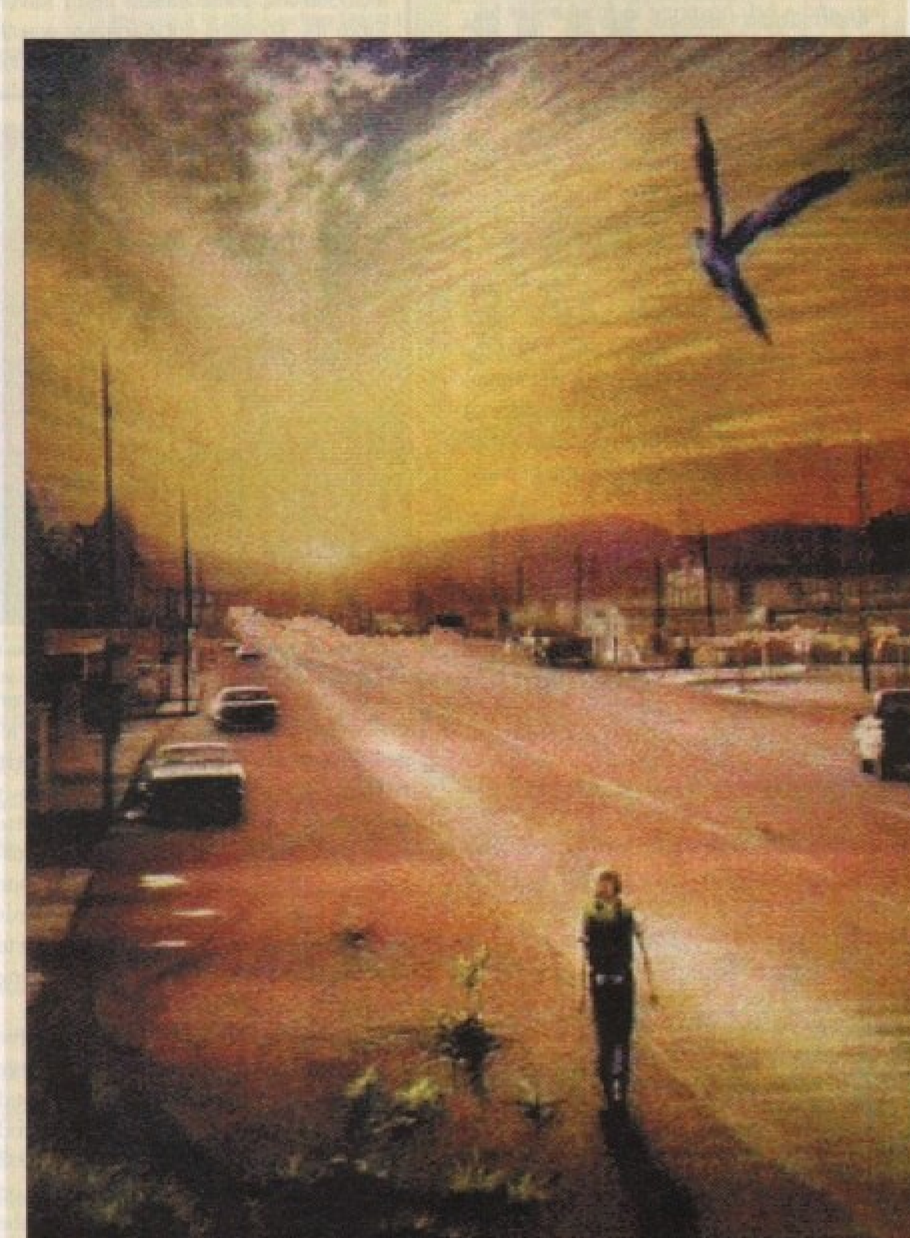


Available from: Phil's PD • Disk No. S7

Coming on three separate disks, Worlds Beyond is a compilation of some of the best book covers that'll ever grace the shelves of the fantasy section at WHSmith, let alone your Amiga 1200.

Well over a dozen pictures lifted from the novels of authors like Harry Harrison and Robert Holdstock, are provided rendered in a very fetching 256 coloured interlace display.

The only real gripe is that you have to boot up afresh for each disk instead of the program simply asking you to insert the next one. Other than this, Worlds Beyond is definitely worth sinking your artistic cravings into. Recommended.


A refreshingly surprising lack of semi-naked women in this AGA gallery of Worlds Beyond...

Down into the Cellar – shot by shot


The stairs pass under your feet in liquid animation as the sweat begins to trickle down your back


The tight claustrophobic space triggers a growing feeling of panic in your gut...


Trembling, the panic turns to terror racing as the pod pulls back its gelatinous lips... the rest you'll have to buy

Calling all PD libraries...

...and individuals with anything remotely worth my while having a peek at. If you want something released as PD, or you're a library with stacks of hot new stuff that you haven't seen reviewed in these pages yet, why not drop me a line with a copy, full documentation and everything clearly labelled? I promise I'll at least look at your work.

Adam Phillips, PD submissions,
Amiga Computing
Europa House, Adlington Park,
Macclesfield SK10 4NP

audience in the office is always a good sign for any package and Animal Land is no exception to the rule. Recommended.

Willy's Humungous Adventure

Programmed by: Matthew Woodroof

Available from: Matthew Woodroof

Willy, for everyone's information, is a floating bodiless purple head who's spent an age and a half hovering in front of his television screen vegetating quite happily.

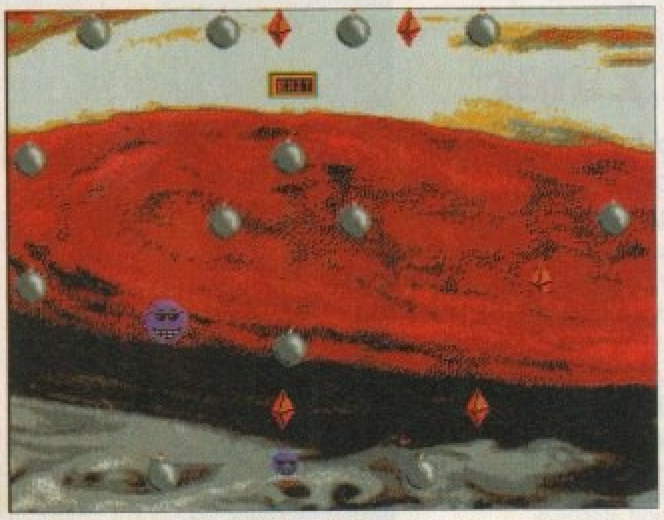
But things have become just a tad confusing. Apparently, the government has banned public transport and makes the good citizens of whatever time, place and era walk through bomb-laden mazes on their way to work...

Erm, suffice to say I threw the plot out of the window and focused on the actual game itself. The premise is simple enough – guide Willy, said hero of the title, round the screen with the mouse, grabbing diamonds.

Bombs are laid out to make life difficult and indeed, stop Willy permanently. Fortunately, power-ups in the form of easier and tighter steering, extra lives and even level clearance aid the player towards victory. Presented in a series of increasingly difficult screens, Willy's Humungous Adventure is a taxing piece of software that's a real challenge but immensely frustrating at times – there's a time limit to complete each screen and the controls using the mouse need time and patience to make for steady steering and the clearing of obstacles.

The net result, though, is a addictive and off-the-wall title – special merits have to go to the sound FX. Willy lets out a loud "yeah" whenever he grabs a diamond and a smile creeps across his face. A drum roll also accompanies every decision made on the Options screen which all adds to the off-beat effect.

There's a definite Jeff Minter-ish feel to the whole affair and for that reason plus the enticement of a truly challenging game that even comes with its own comic, Willy's big one is definitely worth a long, hard look.



Guide the purple-headed Willy round the treacherous obstacle course...

The Small Business Pack

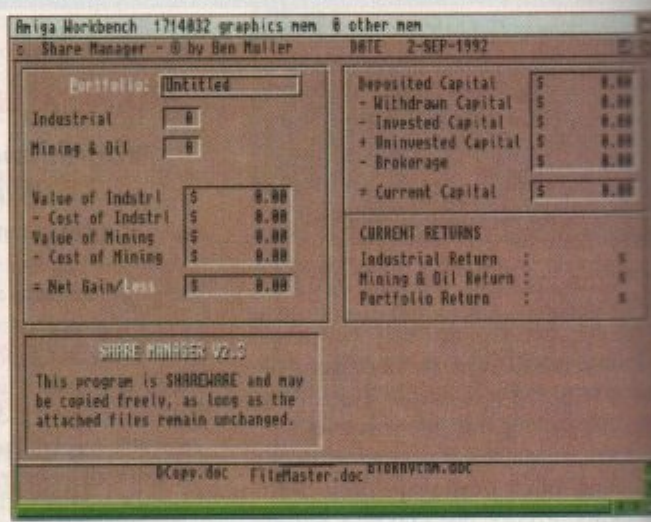
Produced by: GV Broad

Available from: GV Broad PD
Disk No U305

Regular readers of this column will probably notice that Mr Broad's rather excellent small business pack appeared not so long ago in the pages of this magazine. You'll no doubt be pleased that the pack has now been increased to 11 disks with a few new programs to feast the eyes and finances on.

For example, Share Manager allows the user to keep a track on your share portfolio – the only problem being that prog can only handle numbers up to $10,000,000. Then again, if you had that much money you wouldn't need to look after your shares – somebody would happily do it for you.

All in all, this adds up to a comprehensive and highly practical package that at £10 for the entire set is well worth investing in.

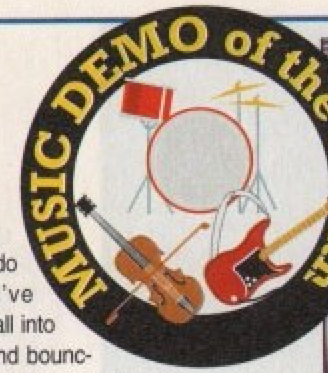


It's back, bigger and better than before – it's the Small Business Pack

Phaw

Produced by: Scoopex

Available from:
PD-Soft Disk No 3529

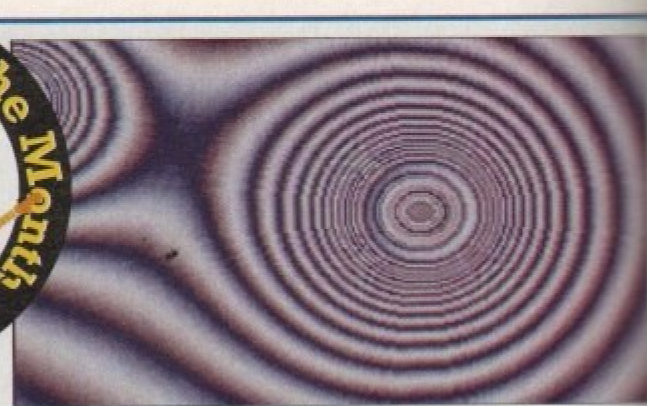


Demos must be a difficult thing to do judging by many of the ones I've received this month. Most seem to fall into the category of whirling 3D boxes and bouncing circles that leads to boredom-inducing viewing.

While no offence is to be given to the people who write these routines because they're probably pretty tricky to do, it shows a distinct lack of imagination.

Phaw suffers from some of the above without a doubt but also included are some effects that I haven't come across before. From the spinning cube (oh no, you think) that is rendered in wispy, web like lines (instead of the usual solid variety) to the fractal-like swirling patterns, this does offer some originality over the competition.

The rave track included isn't bad either and if you're in need of a computer visual fix, then this may be what you're looking for.



Swirling cubes, bouncing spheres and thudding music with a few interesting effects thrown in for good measure...

The Discovery of the Atom

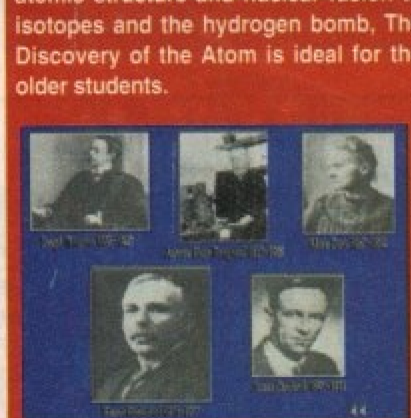
Paul Matthews

Available from: Jorvik Public Domain
Disk No UTO272

Another educational package for this month concerns itself with the scientific facts and history of the atom and its subsequent misuses and achievements.

A multiple choice quiz is presented at the end of the entire session to see how much the user has managed to soak up. Disk accessing and swapping is a little annoying but fortunately, it's possible to install both disks on hard drive.

Packed with text, digitised stills and animations illustrating most aspects of the broad subject from the likes of atomic structure and nuclear fusion to isotopes and the hydrogen bomb, The Discovery of the Atom is ideal for the older students.



Atomic power and its history – did you know that Marie Curie was the first person to isolate radium?

Lay your hands on me

AM Cooke
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David Parsons
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Gamer GLOBE

All the latest news on rumours and releases for you from the Amiga games world



Biggest game of 94?

I bet most of you don't even remember February 14 1991. Well, you should do because that was the day when Psygnosis released Lemmings – a game which has delighted and amazed computer gamer worldwide.

Gamesplayers have rescued the dumb suicidal critters from their certain doom on over 20 different machine formats and thus made Lemmings the biggest selling computer game series of all time.

The green-haired creatures are this year celebrating their third year, in which over the span of time the Lemmings family has grown to include Oh No! More Lemmings, the epic sequel Lemmings 2: The Tribes and the seasonal smash-hit Christmas Lemmings.

The original Lemmings is still being converted to other machine formats, plus the Lemmings merchandise has increased to include the Lemmings comic strip in *Max Overload* – there's even a TV cartoon in the pipeline.

The real news if you haven't guessed by now is that Lemmings 3 is coming soon. According to a Psygnosis spokesman it's going to be bigger and better and contain much more frantic fun than ever before.

As soon as we find out more details about the suicide-'em-up which is sure to be one of, if not the biggest game of the year, we'll be sure to let you know.



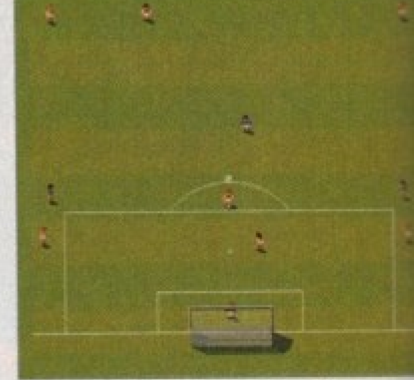
Virgin get Sensible

Virgin Interactive Entertainment have strengthened their existing ties with Europe's leading development team, Sensible Software, in a deal that will deliver a spectacular series of products over the next two years.

Virgin have signed up the next sports simulation from the team, Sensible Golf – a game that will build on the reputation of the classic Sensible Soccer. Golf will be released for the Amiga in the last quarter of 1994. Virgin's European managing director, Tim Chaney commented on the link-up: "Sensible Software's track record is second to none and we're delighted that our ongoing relationship with them now stretches well into 1995.

"Having worked with them over the last couple of years we know exactly how good Sensible is. It makes sense for the number one publisher to seek strategic alliances with companies like Sensible."

Sensible's managing director, Jon Hare added: "We've worked very successfully with Virgin before and they're our perfect publishing partner. They always put the product first and share our obsession with quality. We're both determined to make the next generation of Sensible product the best yet."



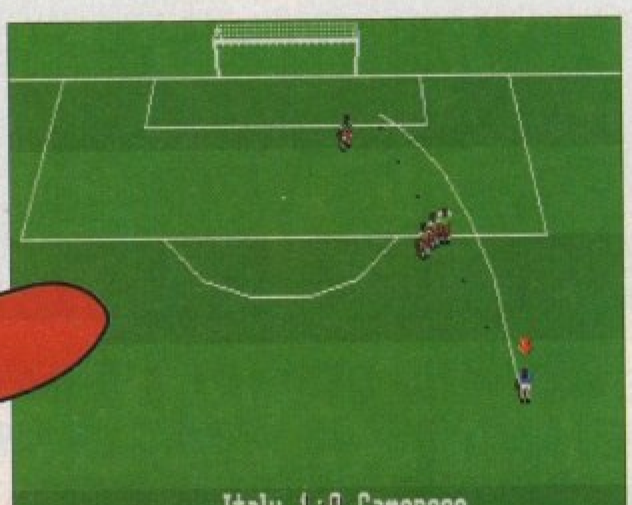
One of Sensible's previous efforts, the award-winning Sensible Soccer

Sierra kick off!

Sierra are renowned for publishing top quality adventure games like Leisure Suit Larry, Police Quest, Willy Beamish and Space Quest, but they're about to enter the sport simulation market with Sierra Soccer: World Cup Edition.

The game contains 24 World Cup teams plus the option to include teams that didn't manage to qualify this year like, er, England. Each team has a 22-man squad with accurate names, positions, skin and hair colours. Sierra Soccer is presented in superb 3D with 4,000 frames of player animation. Other animation sequences include the referee showing yellow and red cards and the physio and stretcher-bearers treating badly injured players.

There will be loads of digitised sound and speech effects for corners, free-kicks and penalties. Sierra Soccer is looking like it could be a bit special and hopefully we'll have a preview lined up for the next issue.



Penalties and free-kicks are all present in the forthcoming Sierra Soccer



The game includes the option to choose between 24 World Cup teams

It's show time!

The interactive games entertainment market has grown and changed dramatically over the last couple of years and the Spring 94 European Computer Trade Show will mirror that development.

The event has always been a focus for and reflection of the growing video games industry attracting exhibitors such as Nintendo, Sega, Philips and Virgin Interactive Entertainment. ECTS Spring 94 will see the first unveiling of the Sega, Nintendo and CD-based titles that will dominate the games market this year.

ECTS attracts exhibitors and visitors from all over the globe as trade and press alike get the first glimpses of the hardware and software stars of the year.

The event will also offer more focus on the much talked about convergence of media and technology as companies begin to demonstrate new software such as games with full-motion video sequences.

The newly launched music video CD titles for machines like Commodore's CD32 and Philips CDi are the closest things yet to interactive movies are also expected to be on show at the ECTS.

Cat Maclean, Event Director commented on the forthcoming show, said: "The games industry is not insular or introspective anymore. It is part of the wider global entertainment market, linking with Hollywood and the music business, creating new and exciting entertainment products for the 1990s.

"ECTS is the place where those ties are visibly strengthened and where companies come together to put long term strategies into place, which will see the games development community positioned at the heart of the converging entertainment market."

The show starts on the April 10 and runs for three days at the Business Design Centre in London. It is trade and press only, but we'll be there to give you the low-down on what's hot for 1994.

Thomas the Tank – certified!

Alternative Software, makers of the Thomas the Tank Engine range of games, are one of the first software publishers in the UK to comply with the new video and computer game labelling regulations. They are currently re-packing all their popular children's collection to include the Uc label which means that the software is particularly suitable for children.

This now means that Thomas the Tank Engine along with Postman Pat, Popeye, Sooty and Sweep will carry for the first time a government suitability warning.

According to Alternative's sales and marketing manager David Watkins this means that "these games are particularly suitable for the younger gamer thus giving parents a greater degree of confidence".

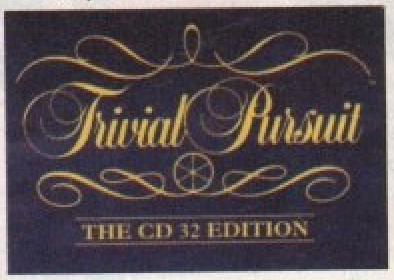
He continues: "Last year we brought together all our younger gamer software under the umbrella brand 'The Children's Collection' and at the same time introduced age guidance statements on all the packaging. The new classifications are simply an extension of this policy."

A new game featuring Thomas the Tank Engine has just been released at £12.99 while the original game is going to be re-released in new boxed packaging which will include the Uc label.

Talkin' trivia

Trivial Pursuit, the activity which causes divorce and family breakdown, is the world's most popular board game and Domark have specially developed the game for the CD32. Using the very latest CD technology you can now answer questions based on actual recorded historical speeches and events.

Each question is also accompanied by a



digitised picture and an animated Master of Ceremonies, Russell the Bird, is there to guide you through each stage of the game and keep your scores.

Russell the Trivial Pursuit bird's script and voice was provided by a guy called Chris Langham who has previously worked as a scriptwriter on *The Muppet Show*.

There are over 2,000 questions spoken by the quiz master, plus guest celebrities such as William Shakespeare and Mae West will ask you the various categories of questions. Trivial Pursuit CD32 should be available by the time you read this and it'll cost you the measly sum of £29.99.



INNARDS

It's big and it's bulging, but enough of my problems, here's this month's superb bunch of games

REVIEWS • REVIEWS • REVIEWS

Man United Premier League Champions.......112
Krisalis' third Man United license and this time it's going to give Sensible Soccer a good run for its money

Simon the Sorceror.......114
Our very own Simon waves his wand as he inspects Adventure Soft's latest magical graphic adventure

Brian the Lion.......116
Psygnosis go down into the jungle and return with a roaring good, console bashing platformer

Puggsy.......118
He's an alien and he waddles and to be perfectly honest that's all I know about Psygnosis' latest platform star. Sorry!

Award Winners Gold.......119
Empire bundle Zool, Sensible Soccer, Jimmy White's Whirlwind Snooker and Elite games together for an incredible price. Bargain!

Winter Olympics.......120
Us Gold head for the slopes and bob their sleighs in the official Lillehammer '94 licence and that's snow joke!

Seek 'n' Destroy.......123
It's a rootin' tootin' helicopter blast-'em-up for the CD32 and Simon Clays in sat firmly in the cockpit

Feature: Gremlin Profile.......108
We see what makes the Sheffield-based software house tick and take a sneaky glance at their forthcoming releases



REGULARS • REGULARS • REGULARS

Cheap Seats.......124
A dose of bargain budgets for those gamers that can't afford the really recent and expensive games

Cheat Mode: Star Trek.......126
If you're suffering from a bad dose of Klingons on the starboard bow then why not use our helpful hints and tips remedy?

On the drawing board: Ishar 3.......128
The third instalment of the highly acclaimed adventure is coming soon. Simon checks out Silmarils' latest RPG offering

Gremlin in the works

Gamer gives you yet another low-down on what makes a software house tick. Jonathan Maddock talks to two of Gremlin's prime movers about the past, the present and the future, while Simon Clays takes a sneaky peek at two of the firms forthcoming releases, K240 and Hero Quest 2



Ian Stewart: managing director

Although he was in a bit of a hurry at the time, we managed to catch the industrious Ian Stewart and sat him down for a chat about life, the universe and everything.

Ian first started out working for Laskys, a high street retail outfit that stocked computers. Making his way up the ladder to become group manager and in charge of five stores Ian noticed that there was a definite lack of support software-wise in the slowly expanding computer market.

Ian got some cash together and decided to set up a shop selling software called Just Micro. He then saw the massive opportunities in actually producing the games software. He quickly found people to produce the games and thus Gremlin Graphics was born.

Gremlin's first ever game appeared on the good ol' Commodore 64 in 1984 and was called Monty Pigeon which was incidentally programmed by Tony Crowther who more recently has made his name with games like Captive and Liberation.

Competing against the likes of Ocean and Imagine way back in the mid-80s was something Ian enjoyed. He took a very active role in producing most of Gremlin's products back then and luckily still manages to do the same now, although obviously he's not as involved as he was before.

Ian lists Lotus Esprit Turbo Challenge, Zool and Premier Manager as games that made Gremlin step up a gear and move into league with the big boys of the computer software industry.

He doesn't actually have a favourite game although he's happy to mention Zool simply because it was and still is Gremlin's biggest selling game.

When asked about the future of the games industry, Ian predicted that most companies will start to tighten their belts. He also foresees that larger groups will join forces to make the best use of up and coming technology such as the CD format, plus there will be lots more corporate tie-ins.

Gremlin's MD also says that they have no desire to stop developing for the Amiga simply because the machine has proved to be so successful for them. He also deems the CD32 to be a very good prospect. This is backed up by the fact that Gremlin have some CD titles currently in development although it's all very hush-hush at the moment and he wouldn't tell me anything about them.

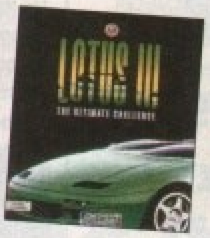
When asked about his what he likes about the games industry Ian said he appreciated the challenge and creativeness of the job. When asked about the other side of the coin he said that he doesn't like the number of computer mags available and could walk into a shop, pick up six magazines and couldn't tell which one was which – although he did say that he liked *Amiga Computing* because it tries to be that little bit different from the norm, so a big slap on the back for us methinks.

My final question to Ian was about the future of Gremlin Graphics to which he simply replied: "Our commitment towards the games industry speaks for itself."

Patrick Phelan • software manager







One of the most important jobs in a software house is that of software manager and at Gremlin the job belongs to a chap called Patrick Phelan. Patrick has worked at the Sheffield-based company for two years. His job entails looking after Gremlin by co-ordinating and using the firm's resources to their best ability.

Patrick is also a first-rate musician and worked on the tunes that appeared in games such as Zool, Premier Manager, Nigel Mansell's World Championship and the forthcoming Hero Quest 2.

Although he's now a software manager he still likes to keep his hand in on the musical front especially now that the new CD format has been introduced.

Patrick works at Gremlin during the week and despite hassle from the girlfriend still manages to find time to write music at the weekend. He lists many different types of music that he likes to listen to, from ambience/dance to classical, and he even has a fondness for film scores.

Patrick started off his computer career by creating programs for business systems. He says that his work at that time was rewarding, but very boring. While reading his local paper he noticed a job advert for Gremlin and went for the position and got it. Now an established member of the team, Patrick says although he gets paid well he does his job because he loves doing it.

He likes the people he works with and although it would be easy for him to, he doesn't want to move, simply because the work he does is so interesting and exciting.

Ask him about his favourite game and he'll enthuse about Gremlin's own Premier Manager 2. He reckons the key to the game's success is the fact that it is so absorbing and he's quite happily had the "one more game" syndrome right up to three and four in the morning.

Patrick says that it's very difficult to predict what the public wants from software and hardware trends, but he does believe that every game should have a two-player or multi-player option. I quote the man himself: "Let's face it if you were to play something like Bomber Man on your own you'd have to be Captain Sad from Sad land."

There is some fantastic technology available to the consumer today, but Patrick hates people who save their money waiting for one of the "super" machines, because this means that they are just sitting on their machines and neglecting to buy software for them.

When asked about the future of games and the technology involved Patrick says that he is eagerly looking forward to virtual reality: "VR is a big, big, big, big thing, but I don't think that it will kill games. It will create an illusion and get as real as you'd need it to be."

Gremlin's Software Manager also believes that the public will have VR in the home within the next year and a half.

When questioned about the future of Gremlin Graphics, Patrick foresees the company climbing onwards and upwards. He's not particularly worried about being taken over by a big corporation, but it would be nice to have branches of Gremlin all over the world.

Technology-wise they are looking years ahead and have already started work on research projects involving things like the FMV module.

Like Patrick I can't see anything stopping Gremlin from going onwards and upwards because from what I've seen the firm's future is looking very bright indeed.





A rough black and white draft of what the box artwork for Hero Quest 2 will eventually look like

Gremlin Previews...

Since the major success of games like Zool, Utopia and the Lotus titles you might think that the Gremlin Graphics team have been sitting back and resting on their laurels. This couldn't be further from the truth! Simon Clays investigates two of their forthcoming releases



K240: Utopia 2

Back in 1991 Gremlin released a title in the God game bracket. Somewhat of a fusion of concepts from Sim City and Populous, Utopia sat you in command of a struggling planet colony in the frontiers of space.

Equipped only with the bare minimum of equipment and resources, your aim was to expand the society on your planet, while opposing potential threats from other lifeforms.

Utopia was an extremely popular title on its initial release and has entered many a gamer's hall of fame as their number one title in this genre. Well, two years on Utopia is about to spawn a sequel in the unlikely titled K240.

Set in the year 2380AD, the Terran Empire has expanded into the majority of the known galaxy, and controls over 50 star systems.

The story develops with mankind encountering several alien species and eventually combining technologies in a quest to reach the stars.

However, the Empire has run into hard times, with inter-colonial arguments erupting throughout the star systems, escalating into minor wars.

Following these minor skirmishes, communication networks began to break down and natural resources got scarcer because of overmining on inhabited worlds.

As this situation magnified, so the corporate-controlled worlds began to hoard their resources and the breakdown of the Empire started.

Salvation came in the form of an imperial exploration fleet that had departed for the Larger Magellenic Cloud (a small demi-galaxy that orbits our own) some 40 years earlier. On its return it reported the discovery of hundreds of new star sys- ➤

Gremlin softography...

Zool	A500/A1200/CD32	Switchblade 2	A500
Zool2	A500/A1200/CD32	Supercars	A500
Premier Manager	A500/A1200	Supercars 2	A500
Premier Manager 2	A500/A1200	Skidz	A500
Disposable Hero	A500/CD32	Shoe People	A500
The Lotus Trilogy	A500/CD32	Shadow of the Beast	A500
Lotus Three the Ultimate Challenge	A500	Chart Attack	A500
Lotus Turbo Challenge 2	A500	Four Wheel Drive	A500
Lotus Esprit Turbo Challenge	A500	Toyota Celica GT4 Rally	A500
Nigel Mansell's World Championship	A500/A1200/CD32	Flonk	A500
Hero Quest and the Return of the Witchlord	A500	Utopia – The Creation of a Nation	A500
Space Crusade and the Voyage Beyond	A500	Utopia – The New Worlds	A500
Harlequin	A500	Venus the Flytrap	A500
Videokid	A500	Team Suzuki	A500
Plan 9 From Outer Space	A500	16 Bit Hit Machine	A500
Ultimate Golf	A500	BSS Jane Seymour	A500
Impossamole	A500	Pegasus	A500
Switchblade	A500	Suspicious Cargo	A500

systems made up of unlimited planetary material and asteroids.

Of most importance to the Empire was the fact that these star groups were densely populated with valuable resources that were much needed by the Empire and could safely see them into the next millennium.

Also, there were a whole host of new unknown ores that had never been touched by human hands that could expand the technology of human kind.

With the prospect of billions of tonnes of ore waiting to be mined, colonies started to pop up all over this once uncharted region of space.

Within ten years the corporations had established major fields and were shipping back large quantities of ores. But, as well as the major companies, licences were granted to independent traders.

They were encouraged to fund colonies with the understanding that they got to keep 30 per cent of any revenue that was generated from ore sales.

It's at this stage that you're going to enter into the foray. When K240 is completed you'll take on the role of one such independent who has recently established a pioneering colony in an uninhabited section of the Magellenic Cloud.

Your missions are all going to plan, until one of your scout ships disappears. At first you're convinced just a system failure is to blame for this phenomenon, until another one of your ships is probed by an alien craft.

As the commander of the colony you will be set several objectives, which will have to be managed and scrutinised very closely if you are to be successful.

First and most important will be the exploration of the Cloud for ores and the expansion of your colony and your mining operation.

Also, you will have to maintain the day-to-day running of your colony, investing time and money into developing scientific research into new inventions.

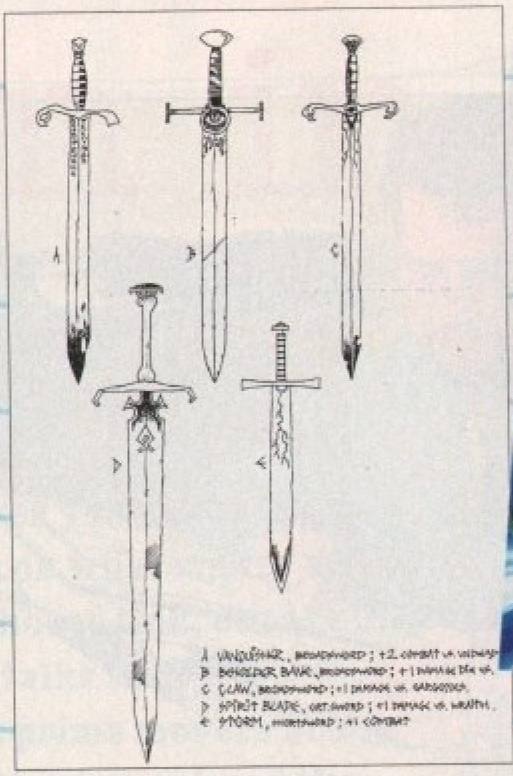
These breakthroughs in technology will encourage better productivity, which will in turn boost the supply rate to the workforce.

As well as the passive workforce you employ, there is also the development and deployment of your colony's militia to take care of.

K240 is set to test your strategical abilities and skills at people management. On the one hand you'll have over 40 different styles of building to manipulate, while you juggle your exploration of up to 24 asteroids per sector with the other.

You'll also have to dispense with or control the six different alien races that inhabit the region around you. To do this you'll have to expand your technology base and improve your munitions plants to facilitate the different ships and missiles you'll be capable of manufacturing.

K240 will also include digitised speech, atmospheric sound effects and a very impressive cinematic opening sequence, but it is not going to be a game for the faint hearted, and you're going to have your work cut out for you with the level of intelligence and strategic qualities the enemy are to be programmed with. After the out-of-this-world success of Utopia and all the resultant enhancements and new scenarios that K240 boasts, I think it's fair to say that strategy gamers are going to have both their hands full for a good while.





Roughs and colour visuals from the Gremlin art department

Legacy of Sorasil

Following the success of the Hero Quest board games, Gremlin were given the task of converting this popular RPG onto the Amiga.

Now, the award-winning 3D isometric adventure game is about to give birth to a sequel in the shape of the Hero Quest Masters series. First to see the light of day will be the closest to completion, Legacy of Sorasil.



Set in the fabled land of Rhia, you will be charged with the task of discovering what malignant evil power is killing off the good folk of the land with a plague.

To help you in your crusade to free the land, you will be able to enlist the talents of a team of adventurers. You'll be able to choose a party of four heroes from a range of would-bes. Perhaps you'll enjoy the bone-melting roar of the Barbarian, or maybe select the subtle powers of the Mystic, the choice will be yours.

Using a point-and-click interface system you must command your band of adventurers, and lead them through the land in a search for clues.

You will be called upon to combine magical skills with the blatant muscle of swordsmanship as you battle your way through ten stages of highly intelligent foes.

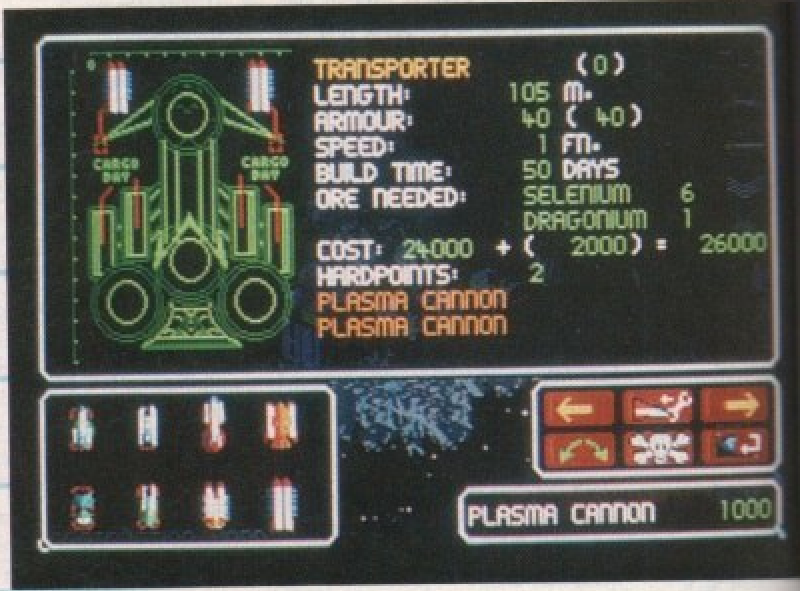
Unlike its predecessor, Legend of Sorasil takes place in a multitude of locations, from the dark dank depths of the Vampire King's barrow, through to the overgrown realm of the Iron-Wood forest; they're all there for you to explore.

As you journey through the land of Rhia you'll learn about its intricate history, and inevitably find clues that may feasibly save your life.

Legacy of Sorasil is shaping up to look like a rather large 3D extravaganza in the world of times gone by. Using an easy to use play system and the now familiar point-and-click control method, Legacy of Sorasil should appeal to both adventurers and arcade lovers alike.

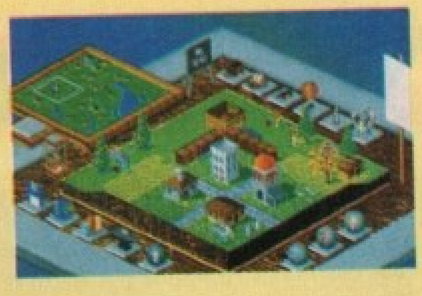


K240 will include digitised speech, atmospheric sound effects and a very impressive cinematic opening sequence



Building new spacecraft is just one factor that will test your strategical abilities









Genesia - a game of creation and power for 1 to 3 players.

The owner of a small land, you must expand and develop your population to become the most significant in the world of Genesia. In 5 worlds, each requiring unique strategies, you must manage everything, from food and water to employment and taxes.

Will you conquer the lands of your 2 opponents, or form an alliance with them in an attempt to recover the seven missing jewels?

Only with a strong economy, powerful army and new technology will you fulfil your ambitions.

MINDSCAPE

Mindscape International Ltd.,
Priority House, Charles Avenue,
Maltings Park, Burgess Hill,
West Sussex RH15 9PQ
Tel: 0444 246333
Fax: 0444 248996

It's been quiet on the football game scene over the last few months and the Sensi vs Goal war has died down, but there's a new challenger in town. Going by the name of Manchester United Premier League Champions, this new boy is ready to give its all and take the footballing crown.

It's been produced by Krisalis and is in fact their third Manchester United licence. The previous two efforts were viewed from the side and Krisalis thought that they weren't going to gain anything by producing yet another one.

Unashamedly inspired by Sensible Soccer, Krisalis have created a football game that is viewed from above. You might think that there's nothing new about that because Sensible did it first and did it best, but you would be wrong because Manchester United Premier League Champions is the game which Sensible Soccer should've been and never was.

Whereas Sensible Soccer was a cartoon-like and more arcade-based game, Krisalis' new piece of software is a true football game for true football fanatics. It could almost be called a management simulator and this is because it has a huge strategy element to it.

This is all thanks to Krisalis's Tacti-grid system. The grid lets you decide where and how you want your players to play. For instance, you can make up any formation you want and unlike most football games they will stick to this formation.

You could have all your team in attack which will leave massive gaps in your defence, but at least your team will stick to this system until you decide to change it. That's just one way of playing that perhaps you'll never use, but it illustrates the point that your team will do exactly what you tell them.

A much better and more practical example would be to tell your full-backs what they should do. Should they stay back in defence or do you want them running up the wings to put crosses in for your forward men? The choice, as they say, is yours.

Manchester United Premier League Champions has every team from the Premier, Endsleigh and Vauxhall Conference divisions featured in it. Each team has "real" players and each one of these players has his own defined skill levels.

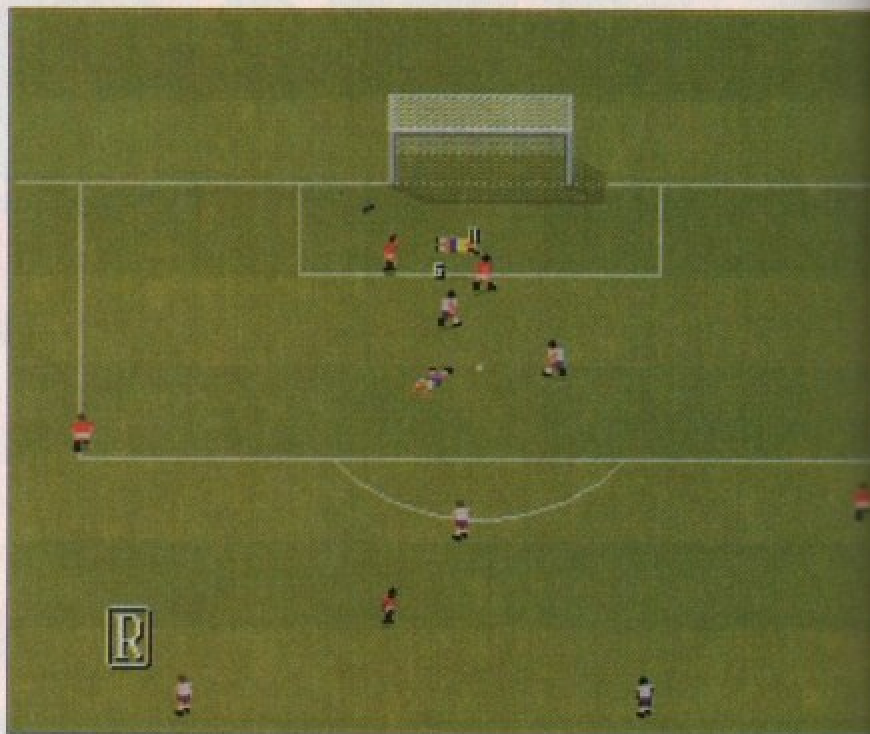
MAXIMUM

Ryan Giggs, as an example, has most of his ratings at the maximum level whereas players from the lower divisions will have lower skill ratings. Most other football games tend to have all the players at the same skill level, but by giving individuals different ratings Krisalis have managed to make Premier League Champions as realistic as possible.

As a rule previous football games have had the option of making your own league and cup competitions and Premier League Champions is not an exception to this rule, but it does give you the chance to play an entire football season or seasons if you're a dedicated enough games player.

You start off with your fresh squad of players and take part in the League, the Coca Cola Cup and the FA Cup. As you progress your players will get injured and you'll have to change your team selection accordingly.

You can also keep an eye on your league position, your squad, top goal scorers and injuries from a whole wealth of statistical information. Weather conditions play a big part in football games and also in Manchester United Premier League Champions. As the months progress the pitch conditions will change, from a hard and dry pitch in August to a frosty pitch in December and so on.



Ryan "nice wiggy hairdo" Giggs bears down on the Spurs goal displaying his talents in the dribbling department

MANCHESTE

I guess you're wondering about what the actual game part is like. Well, there is obviously a huge Sensible Soccer influence to Krisalis' third Manchester United game as you can guess from the screenshots, but they do play differently.

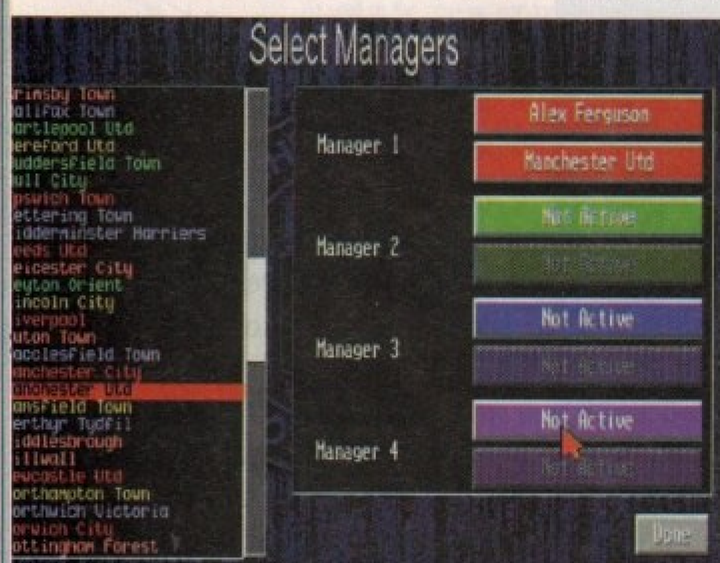
Sensible had very "blocky" player graphics, and although they did the job well enough they weren't exactly realistic. The sprites in Krisalis' effort are slightly smaller, but much more well-defined than those seen in Sensible Soccer.

There aren't any fancy graphics around the pitch like a stadium or dug-outs, but this doesn't really matter because you'll be so focused on the game that you'll not notice.

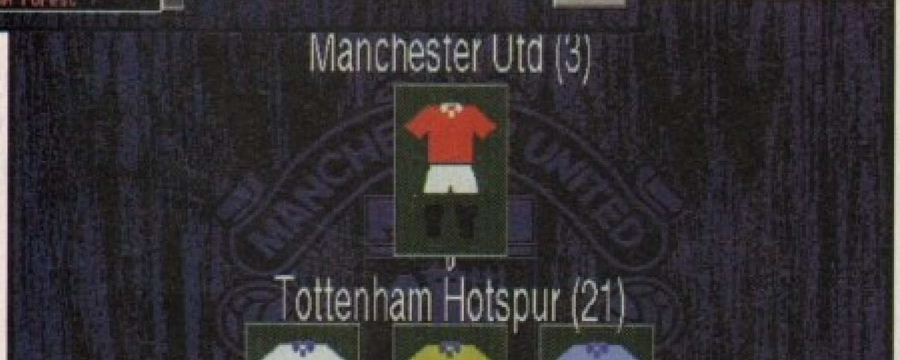
The pitch surfaces can be varied; all the usual pitches are in there like the mud surface, but there are a couple of new ones like the foggy and frosty pitch or the "this game should've been abandoned" as we in the office like to call it!

At first control over the players is quite difficult, rather like the sensation you got when playing Sensible Soccer for the first time, but practice makes perfect and within no time at all you'll be spraying balls all over the pitch like Eric Cantona.

You can make the players shoot, lob, pass, head, chest and volley the ball. Volleying is particularly impressive because the balls roam



Up to four players can choose a team and apparently I'm going to playing against Alex Ferguson!



A nice feature in Krisalis's football game is the option to choose away strips. Make those colour clashes a thing of the past



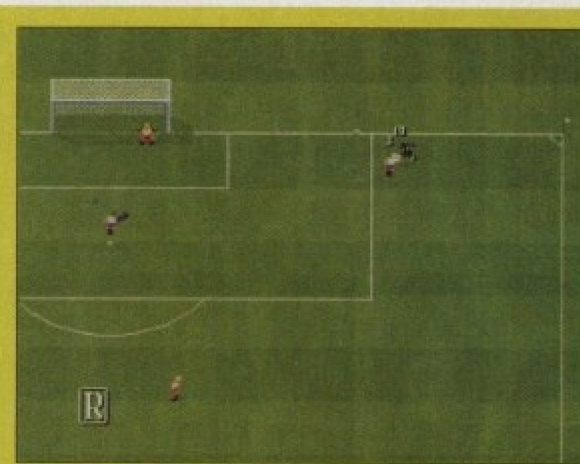
The Tacti-grid is a new and innovative feature that actually works! This strategy element of the game makes Krisalis' effort really shine



Grimbsy forward, Tony Ford makes his way towards Bolton's penalty area



The nimble forward skips around a couple of defenders with the ball still glued to his feet



Tony heads towards the corner of the pitch and then sends over a lethal cross

Action replay



The ball floats over the Bolton keeper and it's getting incredibly close to the net



Oh my word! Tony Ford has curled the ball into the net. Grimbsy's second goal and it's all over bar the shouting

UNITED PREMIER LEAGUE CHAMPIONS

Krisalis return with yet another United licence, but believe you me this piece of software is going straight to the top of the league

across the screen like a nuclear missile and, of course if you manage to get the ball in the back of the net you can look very smug indeed.

Manchester United Premier League Champions has lots of little nice touches, like the replay function. Not only can you rewind, play and watch the action in slow motion, but you can watch your goals going in from the opposite viewpoint.

This was always a problem in Sensible Soccer when shooting down because you missed most of the action thanks to the goal being in the way.

You can substitute your players, but normally in other products you have to wait until your players' legs are half falling off. Krisalis have rectified this problem because when a nasty tackle goes in it actually tells you what state your player is in, this makes those important managerial decisions a lot easier.

Another interesting little feature is the ability to name who takes the defensive and attacking free-kicks and more importantly who takes the penalties. OK, so it's maybe not that important, but it's a lot more realistic than having the player who got fouled take them.

It's all these nice touches which turns a very good game into a brilliant piece of software and the only thing which I noticed that was left out was the ability to transfer players, but hey you can't have everything can you.

Although I detest Manchester United I have to say that Krisalis' Manchester United Premier League Champions would make it onto my top ten Amiga games ever. I've thrown away my copies of Sensible Soccer and Goal because Krisalis have created an ultimately more satisfying football game that will appeal to the true football fan.

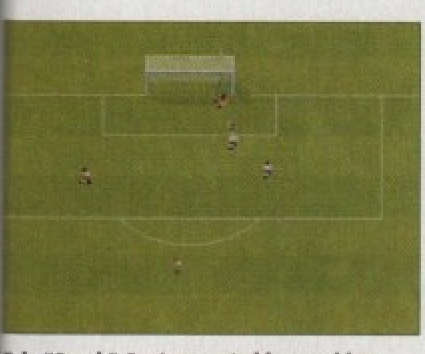
The graphics are nicely presented and highly realistic. Couple this with its level of playability and addiction and you've got a hell of a game on your hands. The management element is what really makes the game for me because it makes the product far more interactive than previous football software.

You might have a problem in controlling your players at first, but over a short period of time you will start to master it.

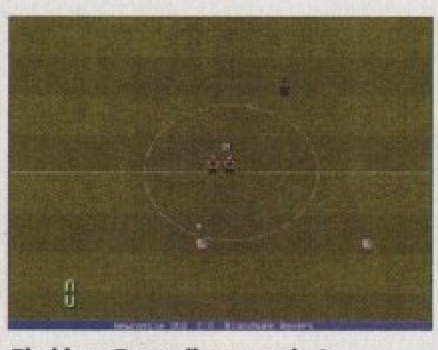
Krisalis have produced some damn fine footy games in the past, but this surpasses them all. I don't know how the games-buying public will take to it, but I've not been able to put it down and I'm off to play it again as soon as I've scribbled these last few words down.

I could enthuse for most of the magazine about how good it is, but space forbids me doing that. I put my hand on my heart I advise you to buy it. I promise you will not be disappointed.

JONATHAN MADDOCK



Eric "Oo-ah" Cantona gets his marching orders for kicking the keeper's head in. See I told you it was realistic



Blackburn Rovers line-up against Newcastle United. A quick toot from the ref and the battle will begin...

GAMER GOLD

VISION

AUDIO

DIFFICULTY

LASTABILITY

Krisalis have produced an absolute scorcher of a football game. Goal and Sensible Soccer fans will want to have this games babie's. Buy it and float to football heaven.

93%

Publisher ➤	Krisalis
Developer ➤	In-house
Disks ➤	2
Price ➤	£25.99
HD Install ➤	No
Size ➤	1 meg

SIMON THE SORCERER

Chant "Ala-Kazam!" and other magical-type sayings as we find out whether Simon the Sorcerer weaves a spell or gets stuck in his magic circle



Simon's just about to take a giant leap...

It's not often that a piece of software wings its way by carrier pigeon to the *Gamer* solitary confinement cell. In fact come to think of it it's quite a rarity for anything at all to come into the office by that means.

That aside, it's not often that something arrives and you find some strange mystical connection. Somehow, you feel intrinsically drawn towards it. In the case of Adventure Soft's new title Simon the Sorcerer there were two uncanny connections that sent an icy chill down my spine.

For one, the main character and I both share the same namesake, and secondly, well I'm not a sorcerer, but when I was in Greece on holiday this girl said I was magic...

No, seriously, not only do we share the same namesake, but we also have the misfortune of coming from the same region of the world.

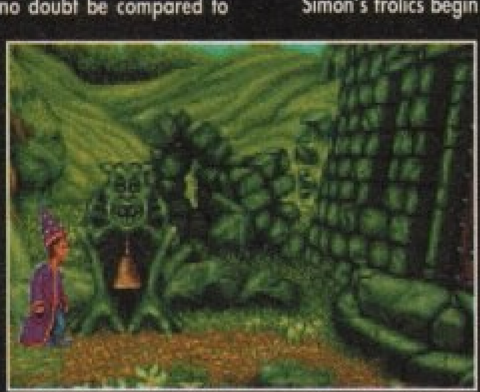
So knowing that Adventure Soft draw their experience and rich sense of humour from that halcyon heartland of Birmingham, I decided to jump in and give them a fair whip of the proverbial crack (am I meant to say that the other way around?).

It's not that this reviewer is particularly sentimental about the area he grew up in, but he knows the prejudice that midlanders have to endure from the rest of the mocking public.

Due to the nature of the accent everyone thinks that Brummies have the IQ of a toothbrush, and it doesn't matter if you're the Dean of Aston (not Saunders you understand) University, people still believe you to be socially retarded.

Anyway, it's very pleasing to see that the mocking and humiliation haven't held Adventure Soft back from turning out a quality product.

Simon the Sorcerer is a point-and-click graphical adventure. It will no doubt be compared to that Amiga benchmark adventure, Monkey Island 2, whether the two are at all comparable is an avenue we'll stroll along later.



The fresh smell of the country air gives way to the Grimm reality of the fairy tale equivalent of Hitler's bunker

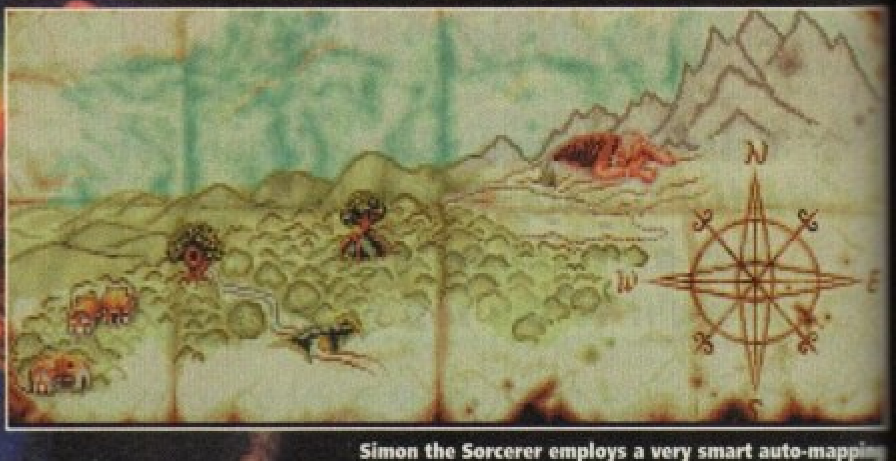
But they both feature a strong element of humour and inane stupidity that render them impossible to take too seriously. This isn't to say that they haven't any depth to them or that your mind drifts while playing, it's just they never attempt to be anything more than fun.

The plot begins and the metaphorical cornflour thickens the gravy, when Simon, the central cha- acter, is thrust into a world of spells, magic an confusion.

Simon's frolics begin when he receives a le from his mate, Caly Calypso is the Gr High Wizard of F Deli, and has sele Simon from hund of other punters to cue him from the h of the evil wiz Sordid.

That's all the plot you're given, and reveal any more of story that unfo around you it mig give away some se and kill the atmo phere.

Being a point-and-click style romp, Simon Sorcerer's gameplay is fairly simple to mas The screen comprises of a graphic window, a

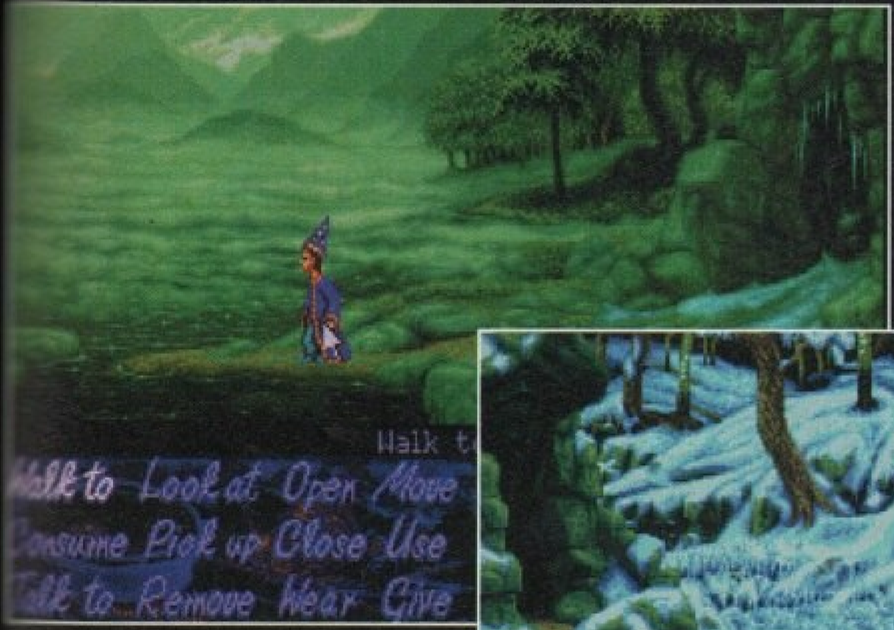


Simon the Sorcerer employs a very smart auto-mappi facility that sends you to the location of your cho



It's a fairy tale acid nightmare. Here Sim encounters a troll-and-goat-rump com





Our hero takes time out to admire the splendid view... now there's Wales for you, not



Out in the frozen wastes, Simon takes time to play musical statues with a Cossack



Remember this adage: If in doubt it's better to be a man with a pig in a poke, than a man with none at all

itinerary list and a command list.

The graphic window allows you to see Simon (it's quite good being able to refer to the game as Simon, because I could be beaming subliminal messages about myself to you), control his movements, communicate and interact with other characters and look for other objects.

Moving your apprentice wizard is just a simple case of clicking on the display area with your mouse. Everything else you require Simon to do is controlled from the command list.

For example, if you wish to use Simon to communicate with someone, you simply click on the "talk to" option and then point your mouse over the person with which you wish to speak.

Most of the other commands that you can carry out operate in this manner and in the majority of cases you are only having to click on the action and the character or object you wish to interact with.

During play if you've chosen to talk to one of the characters and their answer requires a reply, then the you are given a list of replies or questions to click onto.

One of the handiest features in Simon the Sorcerer is the way the game handles mapping. Like many of the more modern titles, STS features an auto-mapper, so you don't have to waste valuable time, pencil lead and elbow grease on drawing on graph paper.

Apart from its time-saving element, the map in Simon has another quite unique facility. If you click on any location that the auto-mapper has mapped, then you're automatically sent there. This not only saves time, but also stops any element of boredom that might creep in from travelling through the same locations.

The locations are some of the most visually attractive I've seen on an Amiga. While they don't pretend to recreate any type of reality, they're stylised in such a way as to give the feel of a fairy tale book.

In fact, some of the characters are pulled straight out of the realms of the Brothers Grimm. So, don't be astonished if you run into wicked witches with houses made of confectionery (there must be a licence tie-in there fellas) or trolls, or goats who are fairly gruff to say the least.

The attention to detail throughout the whole of the adventure is quite stunning. For example, as you are wandering through the forest you'll see squirrels run up trees in fright of you, as butterflies flit and settle around your head (man, it's a hippie/New Age dreamer's haven).

While we're on the topic of graphics, it's worth mentioning that there are two versions to be released. There's the standard A500 version, and an A1200 version which has the obvious advantage of having the extra colours. Apart from this, there aren't that many other noticeable differences.

Simon the Sorcerer is cram-packed with puzzles, funny quips and silly asides. While it's a title that you're not meant to take too seriously, it will give you plenty to think about if you're to complete it.

The main reason for this is that some of the puzzles are really quite abstract in their formulation and will take a considerable amount of time to deduce. This shouldn't be thought of as a criticism, but as a way of making a thoroughly enjoyable sarcastic romp last that little longer.

On the sound front, Simon has a recurrent theme that runs throughout the whole game. As computer soundtracks go it's not too bad; it varies depending upon your encounters and is, at the end of the day, best described as catchy. But like most songs that drop into that groove, you end up hating it intensely.

At the end of a very magical extravaganza of a day, it has to be said that Simon the Sorcerer is a really enjoyable, highly playable piece of software (well folks, how could you slag your own namesake off?).

I think that even the programmers expected comparisons with Monkey Island 2 to be made. However, while Simon the Sorcerer uses the same type of technique to control all of your actions, you could never accuse Adventure Soft of copying Monkey' 2.

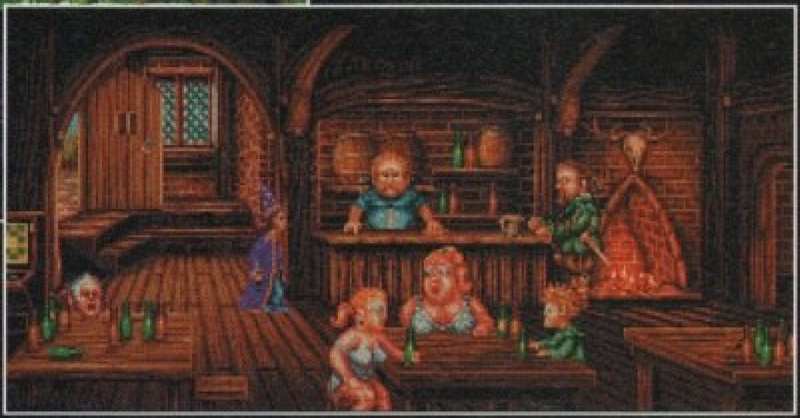
So readers, if you're concerned that you're going to be buying a clone – forget it. The only real similarity between the two is the fact that they are both easy to pick up and get into, and are both endowed with a tad more wit than your normal offerings.

Simon the Sorcerer is a very large (nine disks in all) well thought-out graphical adventure that'll keep you happy and out of harm's way in the land of giants, fairies and dwarves.

SIMON CLAYS



Another idyllic mystical setting to sigh at as you journey along



"For the last time I'm 18, now can I have two pints of lager and a packet of those sausage and herb crisps?"

VISION — 8/10

AUDIO — 7/10

DIFFICULTY — 7/10

LASTABILITY — 9/10

Simon is well thought out, well written and well presented. It's both big without being boring, and fun without ever being flat (oh well, I knew the similarity with myself would end somewhere).

89%

Publisher >	Adventure Soft
Developer >	Adventure Soft
Disks >	9
Price >	£34.99
HD Install >	Yes
Size >	1 meg


The start of the platform adventure and Brian gets himself on the map. He is, of course, our mane man!



Now Amiga owners you can have super duper revolving and topsy-turvy platforms just like your SNES-owning chums

Right, hands up who knows someone who owns a Super Nintendo or a Sega Mega Drive and is always bragging about how "good" the games are. I guess it's just about every Amiga owner out there.

I bet you've always wanted to give them a good smack in the face and show them that your Amiga can keep up with the so-called super "consoles". Well, now you can!

I don't mean you can actually hit them because you'd go to court and get done on a ABH charge and you'd probably sue me for telling you to do it and I'd fall out with you and counter-sue and – well it'd all get out of hand.

No, instead of using your fist, use Brian the Lion as your haymaker. Published by Psygnosis and developed by Reflections (previous credits include all three Shadow of the Beast games), Brian the

BRIAN the LION

Roaring good platform fun from Psygnosis. I'd be lyin' if I said it was rubbish! Geddit! Lion? Lyin'? You see they sound the same, but they're spelled different, oh just forget it

Lion is a platformer that shouts an "anything you can do" warning to all those pesky Sega and Nintendo owners.

Brian is a new kind of hero who wears a wild pair of beach shorts and has an awesome quiff that even Elvis would be proud of, if he hadn't of died on the toilet that is. Brian may look cute, but underneath that character lies a pair of sharp claws and a fearsome roar.

Subtitled Rumble in the Jungle, and a year-and-a-half in the making, Reflections's platformer is a tale of friendship. One day while Brian was chatting with his best buddy Chris the Crystal, they were suddenly interrupted by a big, ugly monster called Geeza.

PRISMATIC

Geeza, who likes listening to dodgy guitar-based rock bands, has kidnapped Chris and is going to use his prismatic powers to hypnotise all the jungle creatures and crown himself king of the beasts.

So Brian is sent forth on a quest. Our "mane" man must take on wave after wave of Geeza's followers and cross the island in order to save his pal and reclaim his title of King of the Beasts.

On the surface Brian the Lion looks for all the world like a bog-standard platformer, but I personally don't think it is thanks to the gob-smackingly good graphics.

It features full multi-layered parallax scrolling, 182 colours on-screen at once and 50 original tunes, and is the first game to introduce the famous Super Nintendo Mode 7-style effects onto the Amiga. These effects are used to zoom, fade, and rotate the graphics and can even map an image or texture onto a cylinder.

Brian the Lion is not all platform action though because halfway through, the game mutates into a left to right scrolling shoot 'em-up that is very reminiscent of an old Gremlin game called Pegasus.

This break in the constant platform fun is most welcome and stops the gamesplayer from getting bored.

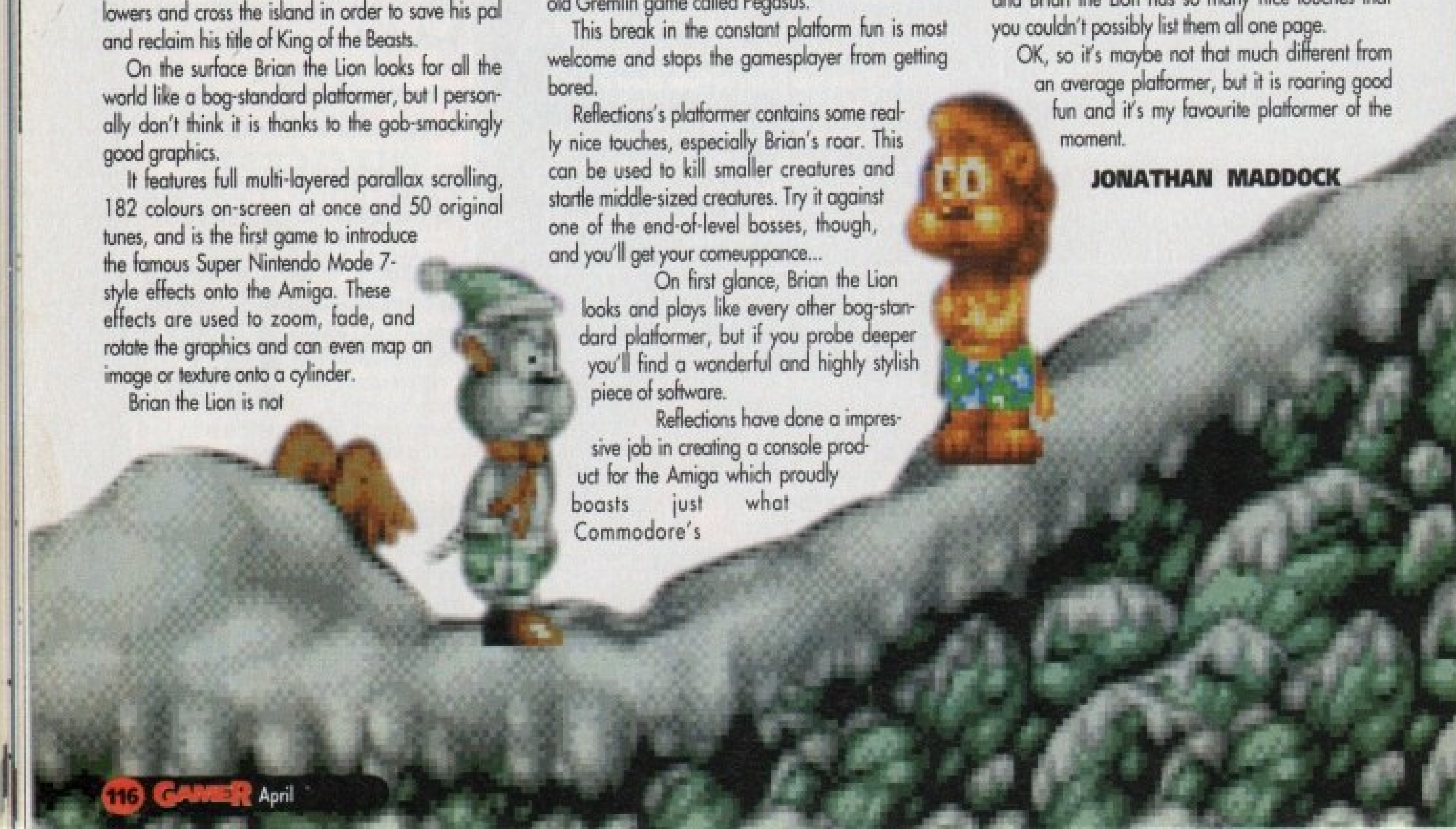
Reflections's platformer contains some really nice touches, especially Brian's roar. This can be used to kill smaller creatures and startle middle-sized creatures. Try it against one of the end-of-level bosses, though, and you'll get your comeuppance...

On first glance, Brian the Lion looks and plays like every other bog-standard platformer, but if you probe deeper you'll find a wonderful and highly stylish piece of software.

Reflections have done a impressive job in creating a console product for the Amiga which proudly boasts just what Commodore's machine can achieve. The graphics and sound are jaw-droppingly good, the addiction level is just about right. Playability-wise you can't go wrong and Brian the Lion has so many nice touches that you couldn't possibly list them all one page.

OK, so it's maybe not that much different from an average platformer, but it is roaring good fun and it's my favourite platformer of the moment.

JONATHAN MADDOCK





Be afraid, be very afraid! Brain takes on a menagerie of beasties, ghouls and goblins in the spooky graveyard level



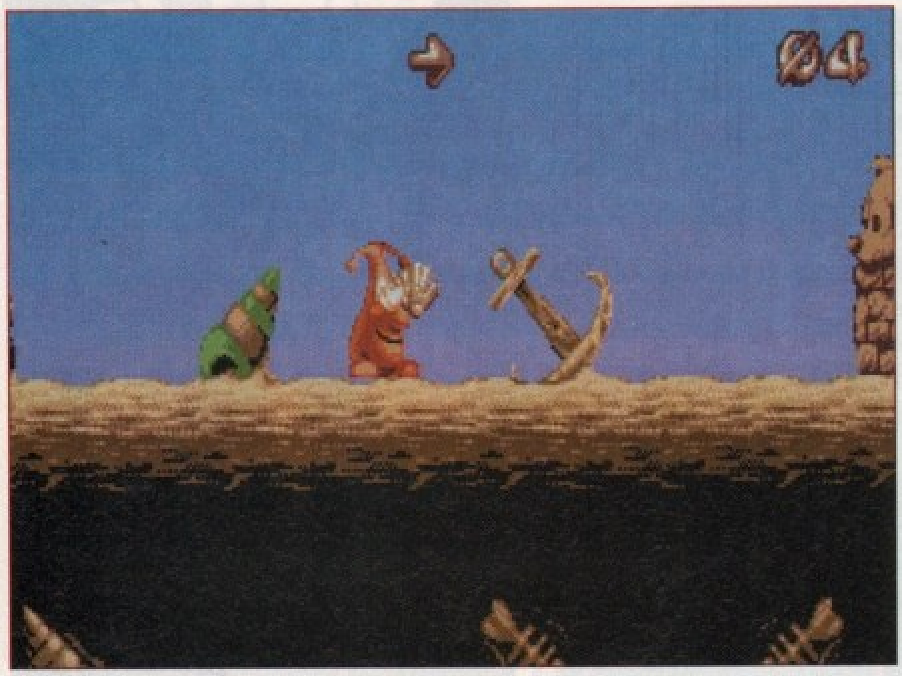
A bad case of hot bot for our intrepid Lion adventurer!

VISION 10/10
AUDIO 8/10
DIFFICULTY 8/10
LASTABILITY 8/10

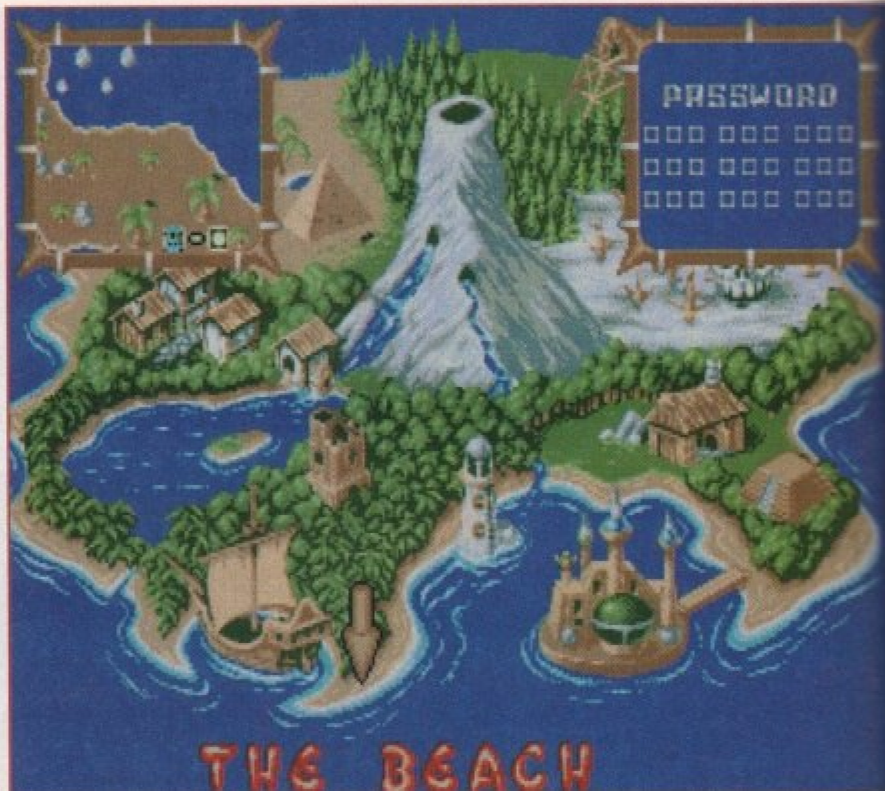
85%

The graphics are sex on the screen, the sound's great, it plays like a platform demon and is as addictive as nicotine and caffeine mixed together. It's certainly the best platformer I've played in a long time.

Publisher	Psygnosis
Developer	Reflections
Disks	3
Price	£25.99
HD Install	Yes
Size	1 meg



The pickled onion, err I mean Puggsy has a word in your shell

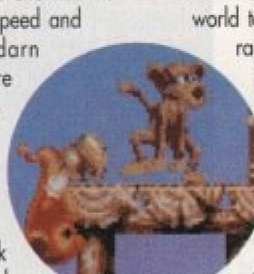


The alien world – looks rather nice to me. Here you can revisit your past locations

PUGGSY

Stifle your cynisism for yet another cutesy platform effort

These days platformers are churned out faster than a whippet on speed and they have to be pretty darn spectacular to attract more than a glance from your average gamesplayer.



An unusual angle or puzzle element is not enough any more to gain interest and I'm afraid Puggsy falls into that same desperate black hole of hopelessness. In fact it maybe worse than that... much worse.

Puggsy is your usual "aah, isn't he cute"-type of character who adds to the sickliness factor. He is an alien (yes, very original) but looks uncannily like a pickled onion with a condom on his head. He has lost his way and has stopped at another world to ask directions but unfortunately some racoons have decided to steal his spaceship. Oh what a story line, the powers of genius, hey?

Puggsy's only hope is to battle through the 17 different locations, 5 end-of-level guardians and to finally reach the ancient city of Raclantis to face the ultimate guardian and eventually rescue his spaceship.

Controlling Puggsy is by joystick and is clumsier than a drunk elephant on roller skates. The controls feel chunky and unresponsive and become very tedious.

Gameplay involves your character picking up the many objects that can be found and using them in some manner to solve the puzzles. Within the level there are switches, locks and teleports which can be activated (or deactivated) by throwing various objects at them. Throw keys at locks to open things, for instance.

Each object has its own "weight" modelled on real world gravity so, for example, holding a heavy object would stop Puggsy being blown around by a fan enabling him to walk easier. Objects can be stacked up to get to higher levels.



JUMPING

Puggsy can also hook objects onto platforms that can't be reached by jumping. As the objects act under gravity, some can float or bounce. Puggsy can make use of balloons which he floats on. Bonus points are awarded for any objects carried through to the next level.

His speed and jump ability can be increased by picking up training shoes, and by using sun shades he is temporarily protected.

On the plus side, (yes there is one) the end-of-level guardians are huge and relatively appealing. The map screen is a nice touch. Puggsy can travel back and fro to all the previous levels he's been to.

Graphics are your usual nice, colourful type thing, well drawn but they would hardly make you gasp in amazement. The soundtracks are jaunty enough and cheerful which only makes it more irritating.

The game would be ideally suited to a younger games player but this hardly rings true when you consider that most of the kids now are demanding the latest and most bloodiest beat-'em-ups!

A lot of effort has obviously gone into this game especially in designing the puzzles, but it really is nothing new. Another platformer, which plods along at a snail's pace, hardly up to Psygnosis's usual high standards.

TINA HACKETT

VISION

AUDIO

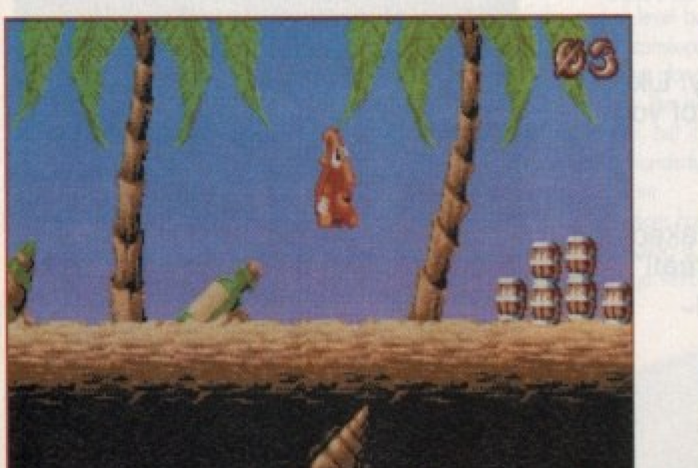
DIFFICULTY

LASTABILITY

Harmless platform fun, to coin a cliché. There are some clever little puzzle elements to work out but they don't really compensate for the blatant averageness of it all.

70%

Publisher ➤	Psygnosis
Developer ➤	The Dome
Disks ➤	4
Price ➤	£29.99
HD Install ➤	No
Size ➤	1 meg



"Roll out the barrel, roll out the barrel..." He really is a hateful little critter, isn't he?



Erm, nice beaver. Oh no, silly me, it's a nasty racoon who's stolen my space ship

AWARD WINNERS GOLD EDITION

Empire have taken four old classics, bundled them into one package and released them at a bargain of a price. Who says life is cruel?

Jimmy White's Whirlwind Snooker

Brought to you by Archer Maclean, the same author behind the great Pool simulation of the same name, Jimmy White's Whirlwind Snooker aims to reproduce all the action of the real snooker game. Highly realistic, it incorporates virtually everything from the real thing.

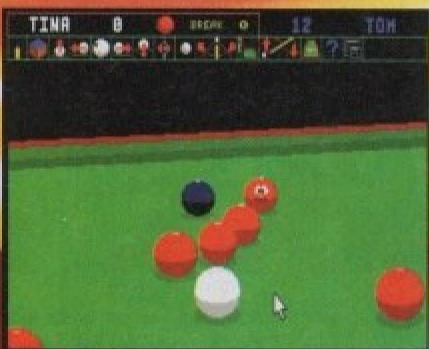
The game allows one or two players to practise against each other, set up and perform trick shots, and compete against each other or four increasingly challenging computer-controlled opponents.

The game is controlled by mouse and keyboard and the clear icon panel allows you to set up your shots as if in a real game. Things such as the amount of power you wish to cue the ball with, whether spin should be used and even when to chalk the cue must be decided.

The game can be viewed from eight different angles to enable you to view the game from behind the ball, or to view the entire table to plan your game and shots more accurately.

This simulation plays and looks like the real thing. It adheres to the rules of the game and the balls obey the laws of physics to the letter.

The game is very easy to control and should provide an excellent sim for both the expert and novice.



Although an accurate sim, there's still time for a bit of humour such as the balls sticking their tongues out if you take too long to take a shot

Elite



Here's your info screen on the planet Lave

Space travel has never looked so good and, although relatively dated, especially with all the recent hype over its sucessor Frontier, Elite can still hold its own in graphics, sound and playability.

A strategy space trading game with a touch of blast-'em-up thrown in for good measure you roam around five galaxies attempting to gain success and become one of the Elite.

You will encounter many planets on your travels which you will need to trade with to achieve success. Land on the space stations in order to trade with the planets. Trade drugs or slaves for higher profit but beware – you run the risk of the law tracking you down in their Viper ships!

You start your adventure on the planet Lave, use prices of goods and buy materials to trade with other planets. Trading prices from system to system will vary so plan your strategy well. Also aim to build up your spaceship from a Cobra Mk3 with its measly pulse lasers to a fighting force to be reckoned with.

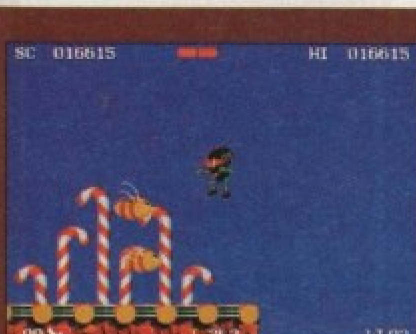
This is a massive game and will provide hours of play. It will provide an incredible challenge for even the most competent strategy-ers. Elite is undoubtedly a classic.

90%

A great bargain of a compilation – and not a duff game in sight! Four brilliant classics for a mere £30. What more do you want for your money?

Publisher ➤	Empire
Developer ➤	N/a
Disks ➤	6
Price ➤	£29.99
HD Install ➤	N/a
Size ➤	1 meg

Zool



Zool gets a buzz in the sweety level

Bright, colourful, cheery, witty, stunning, but hey, that's enough about me! On with the review... Zool is everything you could want in a platformer, a huge game packed with plenty to do, bonuses to collect and baddies to kill.

Although it's yet another platformer, Zool is a great example of its genre and is extremely playable. The graphics are extremely attractive and the soundtracks (choose from four different ones from rock to rave) are excellent and fit in with the speedy gameplay.

As a ninja alien-type thing you must speed around the many different worlds such as sweet world, music world and fruit worlds, facing end-of-level guardians and enemies like the Flying Pea Pods and lethal Toffee Apples.

There is your usual bonus collectibles and a handy range of weapons at your disposal such as smart bombs and invulnerability shields. Bonus levels are also there for you to discover. The range of options included in the game add variety. Choose from levels of difficulty, inertia, continues and speed of the game.

A very able platformer, Zool is a massive game, and with many a nice touch it's not hard to see why Zool was included in this collection.

Sensible Soccer

And as if you thought this compilation couldn't get any better Empire have gone and put the football game of 1993 in there as well! A highly realistic football simulation Sensible Soccer combines all the action and atmosphere of the real thing.

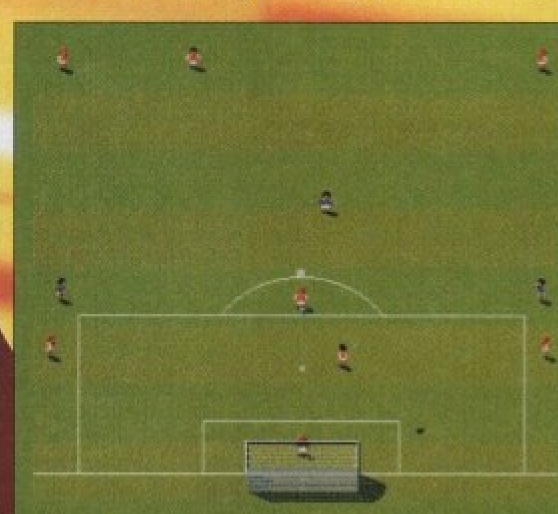
Choose from competing in a friendly game, or take charge of your favourite club or national team from all over Europe in a variety of cup and league competitions. Bring your friends in on the action too by playing head to head or competing in a multi-player competition.

The many options available will help you gear the game to the sort of match you desire. Game length can be altered as can the weather which can be seasonally adjusted and the sort of pitch surface you wish to play on.

The control of your player couldn't be simpler as the controls are extremely responsive and move in the way you'd expect.

The clear presentation of the game and nice graphics are merely an added bonus to the wonderful gameplay. Brilliant stuff!

TINA HACKETT



I was trying to think of an original caption for a football game – hmm, impossible

WINTER OLYMPICS



Ski, skate, shoot and jump your socks off in US Gold's simulation of the world's greatest winter sports spectacle

US Gold have always been some of the leaders in producing top-hole sport simulations, so it comes as no surprise that they've beaten all their competitors to the Winter Olympics licence. The Winter Olympics will be over by the time you read this, but hey, you'll be able to re-live the whole event via your delightful computer.



The official mascots for the XVII Olympic Winter Games are Kirsten and Hakon and their task is to create positive attitudes towards the Olympic ideal and movement. Ahem.

The Olympics this year are being held in Norway's small town of Lillehammer. According to the "souvenir brochure" that you get free with the game, the Lillehammer games will be both an international festival and a sports extravaganza reflecting human achievement based on genuine values. Er, yes.

Winter Olympics (the game) also reflects human achievement based on genuine values, but involves an awful lot of joystick waggling to boot! There are nine different sports to choose from which include ski jumping, downhill, giant slalom, bobsleigh, speed skating, luge and the biathlon.

Up to four players can play Winter Olympics and once you've chosen a name and which country you want to represent you are plunged straight into the action. The first event is the biathlon and it's an essential part of the game because it's a link event between sports in the full Olympic programme.

The biathlon, for those that don't know, is a combined sport of cross-country skiing and rifle shooting. You waggle the joystick from left to right to gain speed when you're doing the cross-country section, you then have five shots with which you must hit the targets otherwise you get a one minute penalty for each one missed. The targets vary in size as you progress through the Olympics.

Possibly the hardest event is the bobsleigh and I've still not managed to get down the "run" without crashing. Maybe, I'm just rubbish at playing games (yeah it's more than likely! – Ed). The bobsleigh is presented in two sections.

The first is viewed from the side and involves you getting your team into the sleigh. The second is a 3D section and is viewed from the driver's point of view. The 3D section is quite good, but I've seen better.

Although Winter Olympics is a multi-player you have to take it in turns to compete in the event except for the speed skating when you can compete against each other.

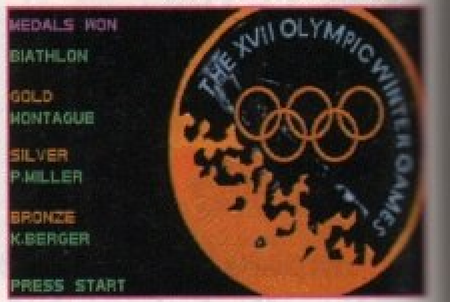
It is an elimination event, so if you get left at the back of the pack you're out. Like many of the sports in US Gold's sports simulation speed skating is a joystick waggler.

Apart from the subtle innuendo, I wish that there could be some way of getting rid of the waggler because they do tend to weaken your joystick and, ahem, leave you with a sore wrist.

But waggling does seem to be the best control method for this type of game, so until someone invents something better we'll just have to put up with.

I'm just skating (ahem) over the events in Winter Olympics, but as with most games of this genre, some are good events while others are bad. Whether you want to buy Winter Olympics all depends on how much you like winter sports. As a simulation it's not amazing, but if you love all things sporty at winter then you'll like US Gold's sports sim. For the average Joe trying to survive on the street there are much better games available to spend your money on.

JONATHAN MADDOCK



Aha. one of those gold medal thingies! I bet I could get a few quid for that down the pawn shop...

Just one thing. Who the bloomin' flip is Bob?





Grab your gun and hit those targets. Pretend you're Lee Harvey Oswald! Oh yes!

VISION

AUDIO

DIFFICULTY

LASTABILITY

US Gold's sports simulation is neither *amazing nor* complete rubbish, so that leaves the in-between bit, but it has got some nice graphics which makes it better than average.

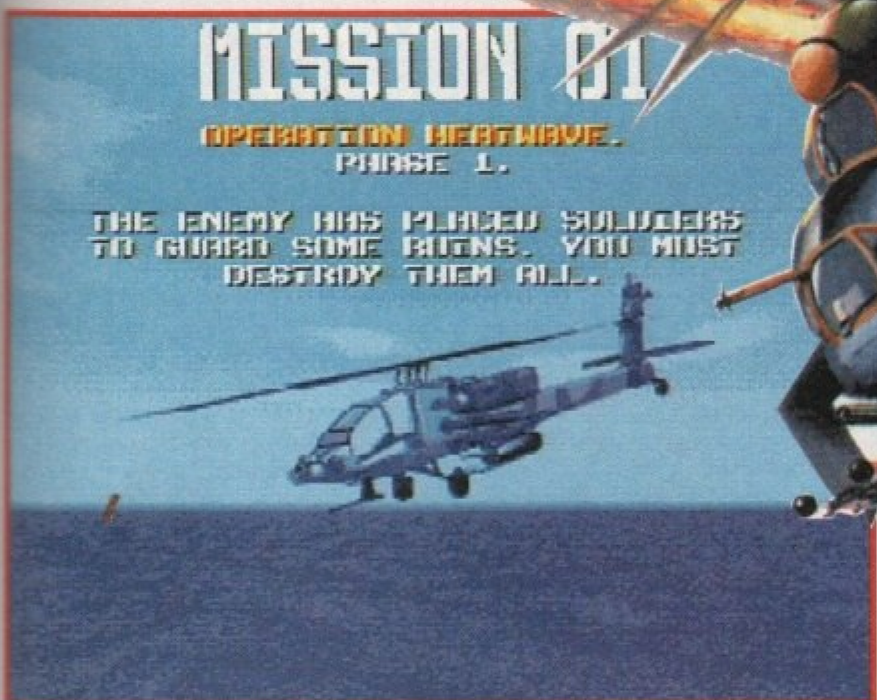
70%

Publisher	US Gold
Developer	In-house
Disks	3
Price	£32.99
HD Install	No
Size	1 meg

SEEK&DESTROY

Another chance to auto-rotate yourself into oblivion in Vision's Desert Strike clone





The mission screen informs you of who you will have to blow into little barbecued pieces

Under normal circumstances a CD title should command more space than we've granted it here. However, as you proceed further into the review it'll become quite apparent to you why we have resisted the temptation...

What you have in Seek and Destroy is basically a Desert Strike clone without the desert or the strike! Seek and Destroy is a fairly straightforward helicopter Gulf-'em-up.

Your overall mission is to take control of the Apache gunship, fly into enemy territory and teach them a jolly good lesson.

To help you achieve the unenviable task of putting every Arab nation through virtual genocide, you have the normal, rather obvious armoury of weapons.

On board are a full range of machine guns and air-to-ground missiles, all of which can be put to great effect. By far the best weapon within your large arsenal is the Air Strike. This allows you to call up an immediate heavy missile strike. All you have to do is fly over the area you want flattening, press the button and get your chopper out of there. Five seconds later the whole area is totally torched in a most effective way.

In fact, by far the most impressive aspect of Seek and Destroy are the sound effects. Improved by the virtue of CD technology, the sound is excellent, from the whipping rotors of the Apache, through to the grind of the heavy machine-gun chewing through buildings.

Like Desert Strike, Seek and Destroy is viewed from an overhead perspective. Graphically, the earthbound views are pretty average and seem as though they were created for an A500, although the way the Apache's shadow casts its pixelled image on to the landscape below is particularly well handled.

At the final analysis Seek and Destroy isn't really that bad in its essence. It moves quite slickly and there's plenty of action within the structure of the missions.

However, there aren't that many missions in total, and more disappointing is the lack of variety involved. For example, in the majority of cases you'll either be destroying other helicopters, or ground-based tanks and buildings.

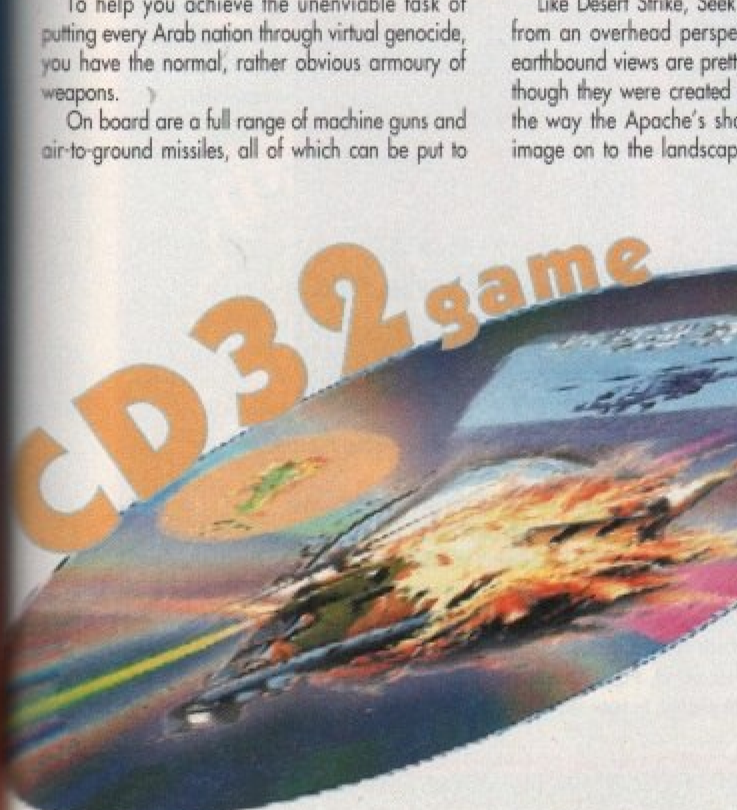
After the first couple of missions, Seek and Destroy soon becomes frustrating and a little dull. Part of the reason is because of the gross lack of variety in the action and the enemy's reliance on downing your Apache by a war of attrition.

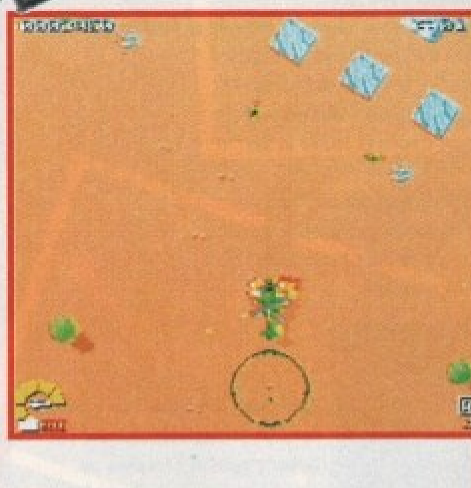
It's not as if they vary too greatly; you just seem to get more enemies on your screen at one time, and it becomes neigh-on impossible to co-ordinate your weaponry among that level of confusion.

To be honest I'm a little disappointed with Vision software. After the quite excellent Cybermetix and their cracking little platformer Woodie's World, Seek and Destroy is well below par.

Given the type of product Seek and Destroy is, it might well have proved popular on the A500 and A600 on floppy drive, and did indeed make a brief appearance. But, as a practically full-priced title for Commodore's 32-bit CD-driven prodigy, it's extremely hard to justify.

SIMON CLAYS





Ooh, no. One of those over-armed Arab types has clipped my tail rotor with a lucky strike from his camel-mounted Biro and blotting paper combination



Char-grilled indigenous desert Bedouin – you got it

VISION – 6/10

AUDIO – 8/10

DIFFICULTY – 6/10

LASTABILITY – 6/10

51%

It's really hard to justify a title of this nature on what is Commodore's flagship console. If it was my money that had been flushed into the maelstrom of the U-bend on a CD32 title of this quality, I'd probably want to flush myself down afterwards.

Publisher ➤ MicroProse
Developer ➤ Vision Software
Price ➤ £25.99

The CHEAP seats

What delights does Tina the Easter Bunny have in store for you this month? Well, lots of yummy chocolatey-type goodies are lacking but what we do have are plenty of budgets reviewed for your deliberation

Another World
Kixx XL • £14.99

Now here's a mystery I've been pondering over for quite a while. It concerns the fact that whenever another futuristic world or planet is portrayed in a computer game, it's always as a gloomy or dismal place to be.

I mean, nobody has ever shown images of future worlds being nice cheery places, where houses are made of no-calorie chocolate, or Saturday night television actually shows something intelligent.

But hey, I guess that wouldn't make for a very exciting plot for the various films, books and computer games that take up this futuristic theme, and Another World is just one of the same.

Gloom, doom, mystery and all things nasty combine to become this highly atmospheric adventure game and hey, does it work well. I was engrossed after merely seeing the story screen.

A young scientist, while experimenting with sub-atomic particles, has his laboratory struck by lightning, teleporting him into another dimension.

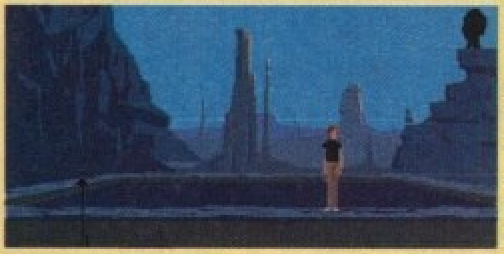
It's a world completely different to earth, and you, taking on the role of scientist Lester Chaykin, must draw upon all your resources and intelligence to survive.

You must explore your new surroundings while avoiding, for instance, dangerous slug-type creatures with their instantaneous death bites, or deadly panthers. Sub-human creatures found in the World will either help or hinder you...

Another World combines excellent graphics, panoramic backdrops and superb sound effects to make a stunning atmospheric game. You'd be one pint short of a booze up to miss out on this one, especially if you didn't catch it first time around.



89%



And here we have our famous tourist attraction, a local beauty spot it remains as serene and tranquil as always. Note the panoramic view and, err, deadly Panther

Eye of the Beholder
Kixx XL • £16.99

Scared though I am of rule books thicker than *War and Peace* and whether I actually know the difference between Lawful Neutral or a Chaotic Good, I delved into the mystery world of Kixx XL's latest RPG-er, Eye of the Beholder.

The action takes place in the sewers beneath the City of Waterdeep in TSR's Forgotten Realms game world. It is rumoured that evil lurks in these sewers, and it must be found and destroyed.

To begin you need to develop your party, choosing four characters all with various attributes, strengths and weaknesses which can be altered. Race, class, alignment and ability must be decided upon for all characters; these attributes will have a marked impression on the outcome of the game.

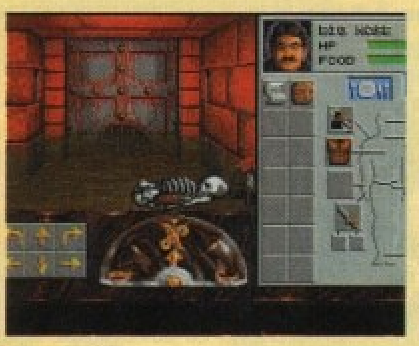
The clearly set-out Adventure screen allows you to keep track of your team, their current states and any objects they may possess. The 3D View Window enables you to see the action. Movement is through the arrow icons and a compass shows your party's direction, and will help you to map the lower levels.

There are a vast number of spells which will help you on your quest such as Cloudkill, a close range spell which billows a cloud of deadly vapour and can kill lesser monsters like leeches.

There seems to be a vast amount here to keep your average RPG-er happy. The good graphics and easy controllability make this a good example of its genre.



82%



"Dem bones, dem bones, dem dry bones." Here is one of your character screens showing his inventory, and erm, a skeleton, how nice!

Police Quest
Kixx XL • £16.99

Men in uniforms sounds like a good idea for a game to me, and Police Quest certainly isn't a disappointment. *Starsky and Hutch* it ain't (which is probably good because Starsky's dodgy haircut left a lot to be desired) but it is a pretty entertaining police adventure game.

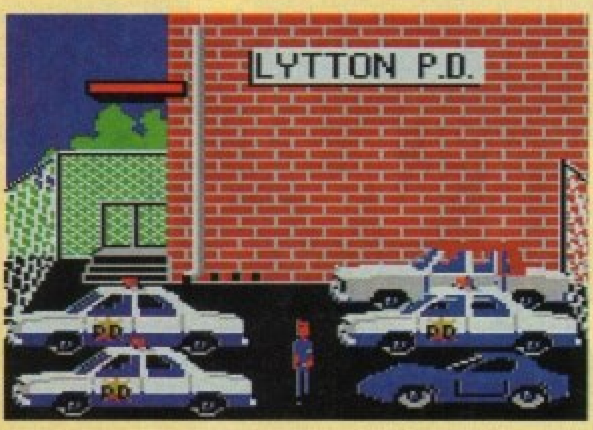
As a typical Sierra back-cataloguer it isn't exactly hot in the graphics and sound departments, but the idea is rather novel which makes for some unusual gameplay.

You start the game as a lowly police officer (called Sonny Bond, hmm!) and must work your way up to the dizzy heights of going undercover to try and bust the notorious Death Angel and his gang, wanted for dastardly crimes of murder, drug trafficking and robbery.

Routine duties such as handing out tickets and attending briefings must be undertaken before you'll get to the top. Personal hygiene and keeping a smart uniform must become part of a police officer's daily routine. All procedures must be followed to the letter or else it's back to cadet school for you!

Points are awarded for each puzzle or clue you can pick up on. Reading newspapers, clipboards and the like can provide vital clues so remember that, however insignificant something may seem, it may prove crucial.

Attention to detail within the game provides a realistic simulation of American police life, as far as I can tell anyway, but having never been an American police officer I



Don't forget to perform your vehicle safety inspection

wouldn't really know. Handcuffing procedures, vehicle safety inspections and driving codes become an integral part of the game.

Commands can be typed in for your character and Police Quest can understand a wide variety of verbs so controlling the game is fairly simple.

The Restore Game function is a great help as it would become extremely frustrating to have to start from scratch each time just because you'd made a small mistake.

Although rather dated, Police Quest is a really playable game and makes a nice change to your usual adventure.



81%


WARNING!
THIS GAME CONTAINS
DANGEROUS PROPORTIONS
OF HUMOUR AND WIZARDS
AND DRAGONS AND GIANTS AND
BARBARIANS AND OWLS AND
QUADRUPEDS AND DWARVES AND
LARVAE AND PRINCESSES AND WITCHES
AND TROLLS AND GOATS AND GOBLINS AND
DRUIDS AND SHAMEN AND WEREFROGS AND...
"What are you leering at ?", I snapped. The rock continued to stare at me but said nothing. It came as no surprise, dear reader. Everything in this magic forest seemed destined to rouse my anger. Only tomorrow a beery dwarf will tell me to naff off and a socially inept Swampling will lay a guilt trip on me. Banishing the shapeshifting witch and freeing Calypso the Wizard had sounded like any old computerised graphic adventure for hot rodding gamers. Yet having savoured the armpit aromas of an angry troll, been eaten by an amphibian and having discovered how utterly uninteresting fungi and flora can be, I find myself in no ordinary quest.
With thousands of frames of (ouch!) eye popping animation and full colour music you must hear with your ears to fully appreciate, you'll move through a land so amazing you'll be amazed.
"Be amazed at the level of safety features!"
"Totally ignore interesting fungi and flora!"
"Visit your cousin, 87 times removed!"
"Do a stretch in prison!"
"Be invited to really interesting dinner parties!"
Simon the Sorcerer
adventure soft
AMIGA SCREEN STAR
'Great Fun, plus Stunning Graphics.'
CU AMIGA, Feb. '94
AVAILABLE ON PC & COMPATIBLES,
AMIGA AND ENHANCED AMIGA 1200.
© 1993 Adventure Soft (UK) Limited, P.O. Box 786, Sutton Coldfield, West Midlands. B74 4HG. Tel: 021 352 0847.

cheat mode

Beam aboard and let Gamer give you an intergalactic lesson on how to complete the first three episodes of Interplay's amazing strategy/adventure

STAR TREK 25th anniversary

Hijacked

A On USS Enterprise
1. Fight pirates

B. On USS Enterprise
1. Hail Masada
2. Response 1, 1 and 1
3. Talk to Spock
4. Use computer
5. Search Masada
6. Use Uhura
7. Send prefix code: 293391-197736-3829
8. Lower USS Enterprise's shields
9. Beam to Masada

C. Transporter Room
1. Use medical tricorder on Transporter Chief
2. Take transmogrifier
3. Talk to Transporter Chief
4. Use Spock on transporter controls
5. Exit East door

D. Corridor
1. Use scientific tricorder on North door
2. Use scientific tricorder on junk
3. Get junk
4. Exit East door

E. Brig
1. Use stun phasers on two guards
2. Use scientific tricorder on brig force-field
3. Use scientific tricorder on brig controls
4. Use scientific tricorder on wires below brig controls
5. Use Spock on wires below brig controls
6. Use Spock on brig controls
7. Take wires below brig controls
8. Exit West door



F. Corridor
1. Use stun or kill phaser on phaser welder
2. Use phaser welder on force field
3. Exit South

G. Transporter Room
1. Use phaser elder on metal bits
2. Use transmogrifier bit on transmogrifier
3. Use transmogrifier with bit on transporter controls
4. Use wire from brig controls on transporter controls
5. Use Spock on transporter controls

H. Masada Bridge
1. Talk to Elasi Cereth
2. Use response 1
3. Beam back to USS Enterprise



The start of the adventure and the crew are all set to go where no man has gone before



Use the Klingon hand on the panel to find out what mysteries lie beyond the door



That cabinet might hold a vital piece of equipment needed to solve the mission

Demon World

A. Colony Buildings
1. Talk to Angevin
2. Use responses 1,1 and 1
3. Talk to Spock
4. Talk to McCoy
5. Enter South-East building

B. Gathering Hall
1. Talk to Brother Stephen
2. Use medical tricorder on Brother Chub
3. Exit North

C. Colony Buildings
1. Exit North path

D. Klingon Field
1. Use stun phaser on three Klingons
2. Use scientific tricorder on Klingons
3. Pick up Klingon hand in front of nearest Klingon
4. Exit North cave mouth

E. Cave Mouth
1. Use medical tricorder on red berries
2. Take berries
3. Exit South

F. Klingon Field
1. Exit South

G. Colony Buildings
1. Enter South-East building

H. Gathering Hall
1. Give berries to Brother Stephen
2. Exit North

I. Colony Buildings
1. Enter North-East building

J. Brother Stephen's Study
1. Give berries to Brother Stephen
2. Use berries on molecular synthesizer
3. Use Klingon hand on Brother Stephen
4. Use Klingon hand on work table
5. Use Kirk on glass case
6. Use response 2
7. Read mineral specimens
8. Read meteorite
9. Read fossil shells
10. Read skull of small alien animal
11. Read twist of metal
12. Use response 6
13. Look at Brother Stephen's computer
14. Take glass case
15. Take skull
16. Take twist of metal
17. Exit North

K. Colony Buildings
1. Enter South-East building

L Gathering Hall
1. Use hypodytoxin on Brother Chub
2. Talk to Brothers Stephen, Roberts, Chub and Grisnash
3. Use medical tricorder on Brothers Stephen, Roberts, Chub and Grisnash
4. Exit North



There is a deadly virus rampaging through the ship and only Kirk and his boys can save the day

M. Colony Buildings
1. Exit North Path

N. Klingon Field
1. Exit North cave mouth

O. Cave Mouth
1. Exit North tunnel

P. Cavern with door
1. Use kill phaser on rocks until man appears
2. Use medical tricorder on Brother Kandrey
3. Use medical bag on Brother Kandrey
4. Talk to Brother Kandrey
5. Use Klingon hand on panel on right side of door
6. Exit North tunnel

Q. Nauian Control Room
1. Use medical and scientific tricorders on machines
2. Use scientific tricorder on Art
3. Use scientific tricorder on slide switches
4. Use Kirk on slide switches
5. Align all three switches to middle position
6. Use scientific tricorder on alien
7. Talk to alien
8. Use skull on alien
9. Use response 1
10. Use twist of metal on alien
11. Beam back to USS Enterprise

Love's Labour Jeopardised

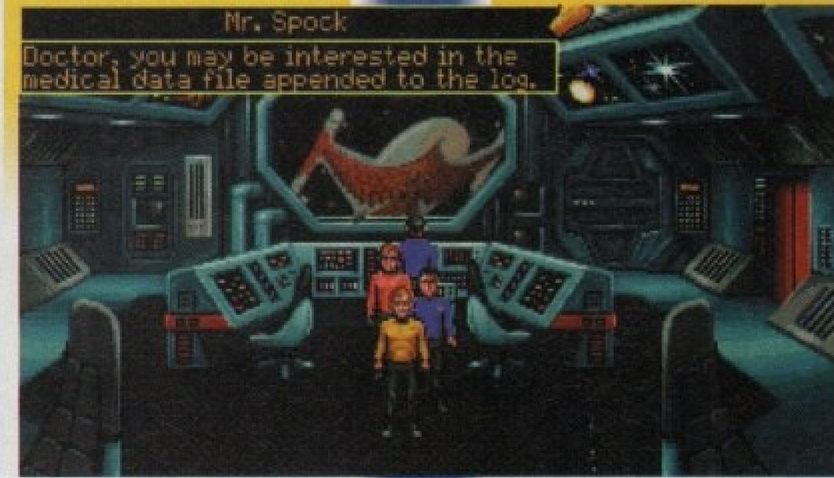
A On USS Enterprise
1. Fight Romulan ship

B On USS Enterprise
1. Hail ARK7 station
2. Beam to ARK7

C. ARK7 Bridge
1. Use Spock on central computer
2. Use McCoy on central computer
3. Use medical tricorder on room
4. Use medical tricorder on Spock
5. Use McCoy on central computer
6. Read TLTDH gas
7. Read orborus virus
8. Read di-hydrogen dioxide
9. Read ammonia
10. Read nitrous oxide
11. Exit North door

D. Synthesizer Lab
1. Use Kirk on left cabinet
2. Take anti-grav unit
3. Look at synthesizer
4. Look at synthesizer chamber
5. Exit East door

E. Research Lab
1. Exit North door



Use McCoy on the computer to try to gain that vital bit of information

F. Fusion Reactor Room
1. Take wrench
2. Use Kirk on right closet
3. Use wrench on N2 tank valve
4. Use anti-grav unit on N2 tank
5. Use wrench on lower panel on far left of computer console
6. Use scientific tricorder on insulation
7. Take insulation
8. Exit South

G. Research Lab
1. Use insulation in distillator
2. Use Kirk on freezer unit
3. Take Orborus virus culture
4. Exit North-West door

H. Synthesizer Lab
1. Use wrench on top of gas tanks
2. Use Spock on synthesizer controls
3. Take water canister
4. Use polyberylcarbonate in synthesizer red chamber
5. Use Spock on synthesizer controls
6. Take TLTDH gas canister
7. Use wrench on top of gas tanks
8. Use anti-grav unit on O2 tank
9. Use N2 tank on vacant valve
10. Use wrench on top of gas tanks
11. Use Spock on synthesizer controls
12. Take ammonia canister
13. Exit East door

I. Research Lab
1. Look at viral accelerator
2. Use orborus virus culture in viral accelerator grey chamber
3. Use ammonia canister in viral accelerator green chamber
4. Use McCoy on viral accelerator
5. Take orborus cure from viral accelerator grey chamber
6. Exit North-West door

J. Synthesizer Lab
1. Use orborus cure in synthesizer red chamber
2. Use Spock on synthesizer controls
3. Take orborus cure serum
4. Use orborus cure serum on Spock
5. Exit East door

K. Research Lab
1. Exit North door

L Fusion Reactor room
1. Use wrench on air vent
2. Use TLTDH gas in air vent
3. Exit South

M. Research Lab
1. Use Kirk on ladder

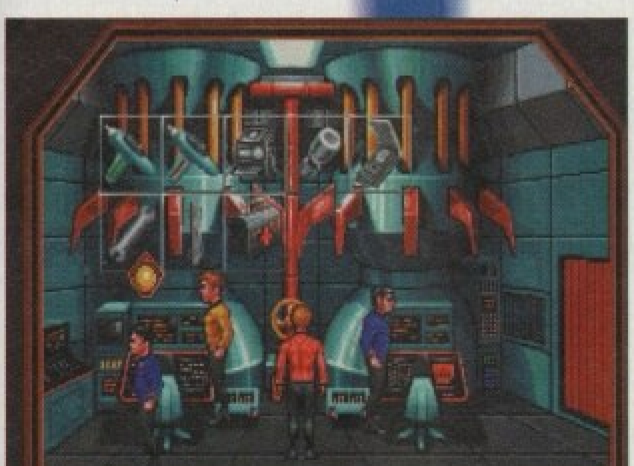
N. Crew Quarters
1. Use orborus serum on Romulans
2. Use water on Romulans
3. Use Kirk on ladder

O. Research Lab
1. Exit North-West door

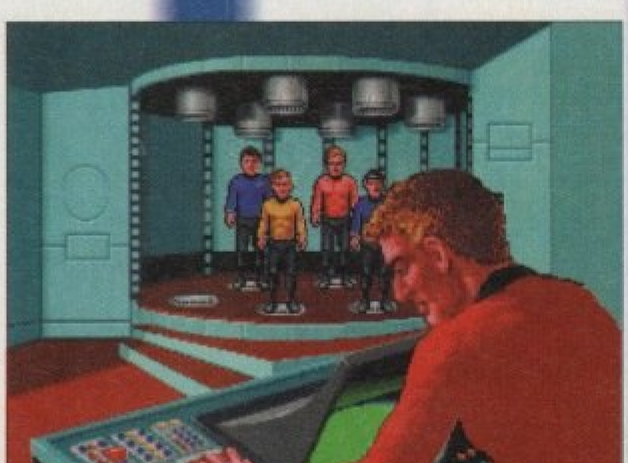
P. Synthesizer Lab
1. Use wrench on top of gas tanks
2. Use anti-grav unit on N2 tank
3. Use O2 tank on vacant valve
4. Use wrench on top of gas tanks
5. Use Spock on synthesizer controls
6. Take water canister
7. Exit East door

Q. Research Lab
1. Use Kirk on ladder

R Genesis Lab
1. Use orborus cure serum on Romulan Preax
2. Use water on Preax
3. Untie prisoners
4. Talk to Preax
5. Use response 1
6. Beam back to USS Enterprise



It's worth picking up that wrench because no doubt it'll come in handy later on



In the transporter room and it's obviously Scotty's day off. Beam us down, err whoever you are...



In Ishar 3 you'll find your team wondering around a wide range of locations, one moment you're in a swamp...



..the next, walking through the cobbled streets of a town

ISHAR 3

It's nearly time to sharpen your kilt, tighten your shield and zip up your sword again, as we take a look at how the third in the Ishar series is progressing

Over the last two years Silmarils have risen to a position of remarkably high stature in the arcane world of the role-playing genre. Based just outside Paris, Silmarils have become one of the leading developers of high quality Tolkien-esque style adventures.

Much of the success of the company is down to the Ishar titles, with their first-person 3D graphics and incredible depth and attention to detail.

Their aim has always been to create state-of-the-art software that, like its inspiration, is rich in dream-like images, colour, sound and plot.

Following the fantastic success across Europe of Ishar's 1 and 2, the French outfit are close to completion on the third title in the saga.

ENCOUNTERS

If you were an avid player of the previous encounters in the land of Kendoria, then you're in for a treat when Ishar 3 is released, as it includes a whole host of improvements.

The plot will once more send you back to Kendoria and the kingdom of Ishar. If you've played either of the other Ishar titles then you'll be more than familiar with the geography and the inhabitants of Ishar.

In Ishar 1, Legend of the Fortress, the peace and prosperity was threatened by Krogh, a rich and powerful Overlord who built the impenetrable fortress called Ishar. It was from the fortress that Krogh launched his bid to control the seven islands that go to make up the kingdom of Kendoria.

Following the defeat of Krogh, the fortress of Ishar became a centre for cultural and intellectual development, casting a radiance and wealth and knowledge to the outermost corners of the kingdom. But, in Ishar 2, a new threat emerged to threaten the idyllic tranquility of Kendoria. Shandar, an evil wizard and a demonic deity all rolled into one, planned to use addictive mind-controlling drugs to enslave the population of Kendoria and take control of the Fortress of Ishar. Those of you who played Ishar 2 through to its conclusion will remember this particularly evil, nasty piece of work, and also recall that to achieve total success you had to destroy him.

The bad news is that despite your efforts in Ishar 2, Shandar is back. Shandar defied nature by securing a policy for the unlikely event of his destruction. He achieved this in the shape of a spell which would enable his energy and consciousness to survive.

So the evil wizard is alive, kicking and still filled with megalomaniac-style ideas to take control of the region. In Ishar 3 he finds a new physical form which is more destructive and malevolent to oppose the forces of goodness.

Being the prudent type of psychopathic would-be dictator, Shandar takes no chances and decides to occupy the biggest, nastiest creature ever to roam the mortal and ethereal plains.

In an uncontrollable lust for power, he chooses to reincarnate his presence in the body of a gigantic black dragon, named Wohratax.





Ishar 3 is set to include some ominous foes





In Ishar 3 shopping can be done in one conveniently sited centre



party researching some arcane myth in a library.

Something new to this new addition to the Ishar trilogy will be animated film sequences of events, which will add a whole extra dimension of reality and atmosphere to the title.

With all these and more features included in Ishar 3, the game looks as though it could well become a benchmark adventure title, and set a new standard in first-person role-play gaming on the Amiga.

Silmarils have always had a reputation for producing intelligent and visually stunning games. While we've yet to see the finished product, both the screenshots and early demos look set to give role players a very large, very involving dip into the world of Tolkien. But remember, too many jaunts into this fantasy world could become Hobbit-forming...

...tax is over 2,000 years older, and the last ...survivor of the Black Dragon race. His story ... back to times when dragons were fre... used to fight battles.

...one particularly desperate onslaught ...en the White Knights and the evil Powers of ..., all of the Black Dragon race was wiped ...Only Wohratax survived the battle and as a ...rd for his courage and bravery, he was cre... Lord of Sith and made ...rtal.

To capture this great prize, Shandar must per... the reincarnation ceremony during the plan...ry conjunction of the two moons, the sun and the planet Ishar. This is where you're set to come into the action. Taking the role of a party of adventurers, you must destroy the dragon before Shandar can perform the ritual which will transform him into the most powerful entity on the face of the earth. According to Daze Marketing who handle the UK promotional activities of Silmarils, the key to success in Ishar 3 is time. Though you will not directly race against the clock, you'll have to travel through various time portals which will lead you to varying historical zones in the development of Ishar.



SIGNIFICANT

In order to achieve any significant progress you'll have to make sure your team appear at all the salient points in time, and affect history in the correct manner.

The main overriding feeling you're left with after Ishars 1 and 2 is the attention to detail, accuracy and distinctive look that Silmarils games have.

Fans of, or indeed newcomers to, the Ishar titles will be pleased to hear that Silmarils are keen to maintain that image, and are packing the game full of enhancements to add even more realism.

While it's too early to determine exactly what the final product will contain, this progressive French software company are boasting some fairly impressive additions.

One of the areas that they're paying extra attention to is character generation and selection. In Ishar 3 you'll be able to select from over a 100 different characters and assign your party with a whole host of personality traits.

Also, like in many games of this genre, you'll be able to re-load teams you've used in Ishars 1 and 2, giving your adventures an extra dimension of realism and a history that you yourself are familiar with.

As well as the rich array of weapons your dwarves and barbarians can yield, there'll be a wide vocabulary of spells to cast, conjure and recite at your enemies.

While your not slaying and hacking your way around some forest or wilderness, there's a whole host of indoor locations to hang your sword up in. These will vary from dank caverns through to brightly lit inns and taverns.

There are also a large number of other buildings which you'll be able to explore and map during play. So, rather than traipsing around swamps all day and night, you might find your



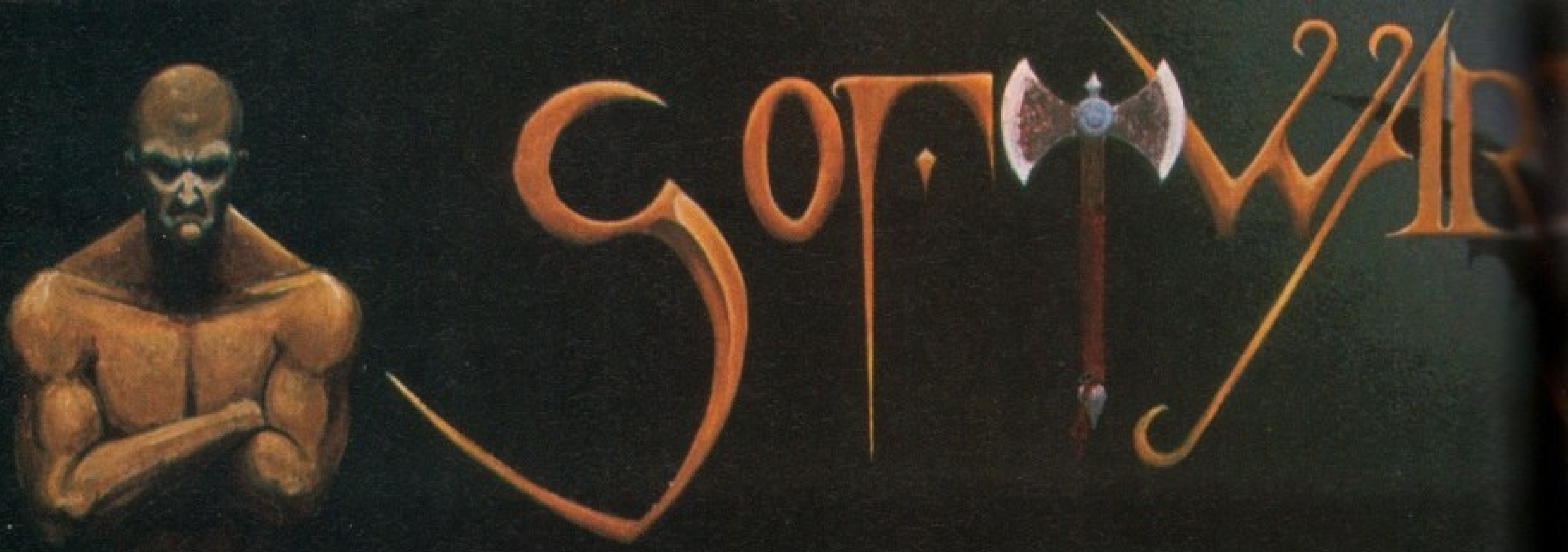
Silmarils



Here in an eerie underworld, you'll encounter strange gaunt figures in feminine garb



The point-and-click icon controll will continue to make movement and combat light work



We are recognised in the Amiga community as one of the leading specialists in Hard Drives and Mass Data Storage.

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The flagship of the Commodore Amiga range. Based around the 68040 processor. Comes with a Hard Drive, 2+4 RAM and WB 3.0.

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AMIGA A4000/030

The same specifications as it's big brother but designed around the 68030 processor. The A4000/030 comes with a Hard Drive, 1+1 RAM and WB 3.0.

(FOR 2+2 PLEASE ADD £69)

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AMIGA A1200

The A1200 sports many of the features of the A4000 series. Based around the 68020 processor with 2Mb of RAM and WB 3.0 as standard. A full range of Hard Drives are also available for the A1200.

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DESKTOP DYNAMITE PACK

The desktop Dynamite Pack contains 5 pieces of software written specifically for the AGA chipset, which includes DpaintAGA, WordworthAGA, Oscar and other with a total street value of over £300. (PLEASE ADD £40 FOR DTD PACK)

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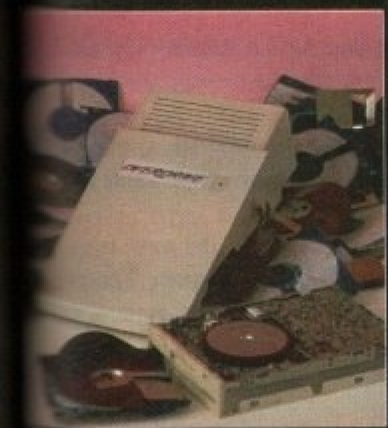
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OVERDRIVE 35

These external hard drives come in an ABS box styled to match the Amiga A1200. They plug in via the PCMCIA slot and include an external PSU so as not invalidate your Commodore warranty. Ultra fast ...nsfer rates of up to 2Mb/sec. Full 1 year war...nty, all the software needed to mount and ...nfigure the drive is included.

...0Mb version –£299	340Mb version– £449
...0Mb version – £349	426Mb version– £549
...0Mb version – £399	540Mb version– £699

...1200 UPGRADES

...P SCSI/RAM BOARD

...s board is user fittable via the trapdoor ...pansion slot of the A1200. It has slots for up to ...b of 32bit RAM, a maths co-pro and includes a ...SI interface as standard.

...b / NO FPU	£179.00
...b RAM/33MHz FPU	£349.00
...SI CABLE KIT	£ 59.00

...P A1230 BOARD

...other quality trapdoor expansion for the ...200. It features a 68030 processor as standard ...d has slots for a maths co-pro and up to 8Mb ...32bit RAM.

...b / NO FPU	£269.00
...b RAM/40MHz FPU	£439.00

...P ACCESSORIES

...MHz 68882 FPU	£ 99.00
...MHz 68882 FPU	£129.00
...b 32bit RAM	£ 64.00
...b 32bit RAM	£153.00

...B RAM BOARD

...s budget expansion board fits via the trapdoor. ...has 2x32bit SIMM sockets for up to 8Mb of ...emory, a 16MHz 68881 FPU, and a battery ...cked clock fitted as standard.

...B with 0Mb RAM/68881	£ 99.00
...B with 1Mb RAM/68881	£129.00
...B with 4Mb RAM/68881	£229.00

IDE INTERNAL HARD DRIVE KITS

These kits come complete with screws, instructions and all the software necessary to prep and configure the drive.

40Mb–£139	60Mb–£119	80Mb–£179
120Mb–£279	209Mb–£399	

A4000 UPGRADES

PHOTON (FOR A4000/030)

This board wil transform an Amiga A4000/030 into a fully fledged 040. It features a 040 CPU module with a MMU and a built-in FPU running at 25MHz.

PHOTON UPGRADE £699

HELLFIRE (FOR A4000/030)

This is a replacement CPU board for the A4000/030. It features a 50 MHz clock speed, a built in MMU and a 50 MHz 68882 FPU. Your 030 will only be 10% slower than an 040 during most operations.

HELLFIRE UPGRADE £299

DKB 128

The DKB 128 is a 0 wait state memory expansion board for the A4000 series. It has slots for up to 128Mb of 32bit RAM using SIMMS of any size. It is a true ZORRO 3 card which makes for a very fast board.

DKB BOARD (BLANK) £269 (See chips for memory)

HARD DRIVES (A1200 & A4000)

These Hard Drives can be fitted at any time by us (FOR THE A1200) or the end-user. All the necessary software is included.

85Mb – £129.00	330Mb – £299.00
130Mb – £149.00	426Mb – £369.00
200Mb – £199.00	540Mb – £399.00
250Mb – £249.00	
FITTING FEE FOR A1200	£ 29.00

CHIPS

1Mb SIMM	£ 39.00
4Mb SIMM	£134.00
25MHz 68882 FPU	£ 89.00
33MHz 68882 FPU + CRYSTAL	£ 99.00
40MHz 68882 FPU + CRYSTAL	£129.00

CD32 CONSOLE

This machine represents the future in home entertainment and video game play. A self-contained CD console which you can expand into a full CD based home computer. CD32 comes complete with two stunning AGA games.

ALL FOR JUST £279

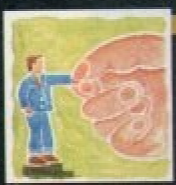
We offer a full fitting, installation and advice service to anybody interested in upgrading or adding a Hard Drive to ANY system.

A full range of Amiga products are available from our mail order service at:-

SOFTWARE DEMON Ltd.
(0736) 331039

AMIGA insight

Expert views on the latest applications



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Out o

In the last few issues we have had an introductory look at programming Intuition graphics with ARexx, enabling us to leave the bounds of the CLI and to write programs with a true Amiga look and feel. We will now look at a subject that is supposed to be exceptionally daunting, namely, interfacing with ARexx.

Before some readers run off, let me say that we will not be presenting reams of cryptic code here, but rather studying the basic principles involved (hopefully the code will be clear too!).

Even users who never intend to write an interface in their lives will be able to gain an insight into ARexx's inner workings which will allow them to get the most out of their own favourite ARexx applications.

In fact, some of our first examples will be presented, not in C or Assembler, not even in Basic, but in ARexx itself! This, I hope will make everything as clear as possible. Like so many other things in computer programming, our subject is not too bad once you break it up into manageable bits.

By the time we reach the end of this study you will be able to add an ARexx interface to your own programs, either by designing it from scratch, or by grafting it on using one of the several available utilities.

To understand the ARexx interface we must first look at its basic building blocks. In a bare-bones ARexx system, there are three of them:

First is the Interpreter (libs:rexxsyslib.library). As you probably already know, the interpreter is implemented as a shared Amiga library.

There are two advantages to this approach: it makes for easy multitasking, since several ARexx programs running simultaneously can all share the same interpreter (try doing that in Basic...) and certain of the mechanisms used by the interpreter – especially those used for interprocess communication – are available to the programmer as functions, so they don't have to be reinvented every time an interface is designed.

However, since the interpreter is a library, it cannot be used on its own, but needs a process to call it up. This brings us to the second element, the Resident Process (Sys:System/RexxMast).

The resident process is the controller at the core of the system. It is launched with the RexxMast command (which regular ARexx users will already have somewhere in their startup).

The resident process does two jobs: it opens a public port named REXX by which it may be accessed; and it keeps track of all global information about the ARexx system – the number of ARexx programs running, the libraries that are available, and other information about ARexx resources. Once launched, the resident process remains available until it is specifically shut down.

All communication between ARexx units, regardless of its nature, is performed by ARexx messages sent to ARexx ports, and by the replies posted back at these ports, once the messages have been processed.

The details contained in the messages may determine the specific behaviour of the system, but there is absolutely no ARexx activity if there isn't a port and a message involved.

So, for instance, whenever you run an ARexx program, what you are actually doing is sending a message with the details of the program to the REXX port of the resident process. The process then loads up the program, oversees its interpretation, and returns the relevant code or result back to you.

The command launcher (Sys:Rexxc/rx) is the most common way to launch an individual ARexx program. The rx command sends the information about the program you want to run to the REXX port, as described above.

It will also determine details like whether your program is a file or a quoted string typed at the CLI, and receive any messages returned from REXX port, printing their details at the console.

It is useful to remember that rx is not the only way of launching an ARexx program. Most applications programs with advanced ARexx interfaces allow you to launch ARexx scripts without leaving the application environment.

There are also third-party Shells that can launch ARexx programs without rx, and even some rx clones. Of course, you can also launch a program from within another ARexx program simply by giving its name on a line.

ARexx treats all unrecognised lines as external commands and sends them off to the current port, which is REXX by default. By now you should be able to see clearly that all the above cases are equivalent – all they do is send the details of the ARexx program we want to run to the resident process!

We have said that every application program with an ARexx interface, must have (at least) one port to receive and reply to ARexx messages.

The name of the port is selected by the application. Each application obviously also has its own set of meaningful instructions to which it can respond. Such an application, with a port and a set of instructions, is officially called an ARexx host.

Suppose we want a host application to do something automatically, such as getting a drawing program to draw a line, a text editor to perform a search or formatting operation, a communications program to scan the

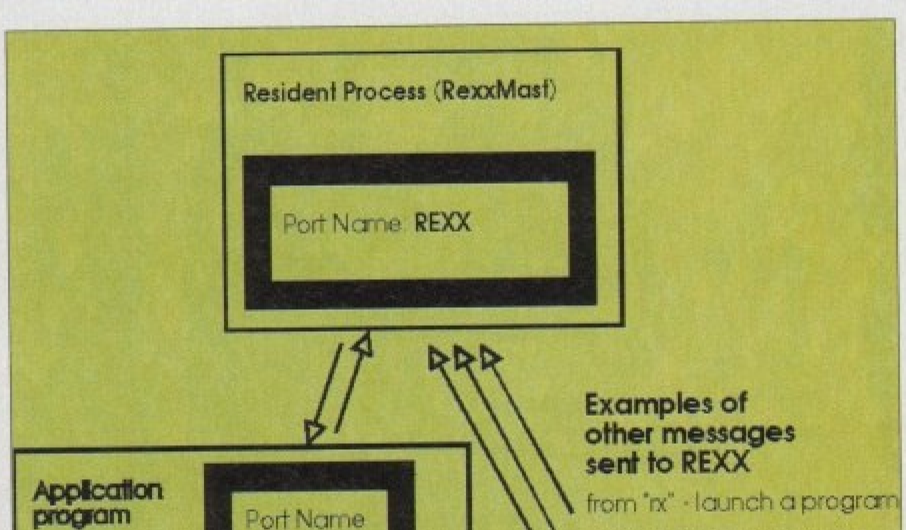


Figure 1: Sending messages

data from the modem, a test utility to beep, or whatever...

In order to make the host perform the desired action, we have to make sure that a relevant ARexx message gets to the host's port (we will see how to do this later).

This message will contain the instruction we wish to send, any extra arguments, as well as certain other details, which we will look at soon. Once the host receives the message, it is responsible for extracting the relevant information, processing it, and sending back the return code and any results.

By now it should be clear that the resident process itself is a host. We could say that there are two broad cases of ARexx messages travelling around the Amiga environment.

Firstly, there are those messages which are going to the REXX port; these in turn may either be launching programs, or otherwise acting on the resident process. Secondly, we have those messages directed to the ports of specific hosts requesting an action.

At this point, we should make it clear that ARexx supports two different types of host, known as command hosts and function hosts.

Although they both obey all the rules that we have outlined above, they differ in the way they are called from an ARexx program; they also differ in the way they receive any arguments and return any results.

When adding an ARexx interface, we must first decide which one to use. Each has its own advantages and disadvantages.

Commands are sent to a command host's port by specifying the port's name within the ARexx program (using the ADDRESS instruction).

It is the ARexx programmer's responsibility to make sure it is set correctly, although some applications may set it automatically. Commands sent to a command host are all in the form of a single string, and any arguments are separated by blank spaces. For instance:

```
ADDRESS 'PortName' 'CommandName' Argument1 Argument2 Argument3
```

There is no limit to the number of arguments, and the whole command string may be up to 64k long. Results from Command hosts have to be requested specifically by setting OPTIONS RESULTS instruction and checking the special variable called RESULT. Command hosts are the more common, and in some ways simpler to implement.

Functions hosts' ports do not have to be specified, since they add themselves to the ARexx system as soon as they are launched (by sending a special message to the REXX port of the resident process).

From then on all the functions defined in the host, are available as if they were part of ARexx. When searching for a function, the system follows the standard order of functions defined in the program itself; built-in ARexx functions; libraries and function hosts; and external programs.

One of the problems with this system is that all function names are treated as global by the resident process, so you have to make sure that your function host is not subject to name clashes. Host functions are called just like regular functions. For instance:

```
FuncRes = HostFunc(Argument1, Argument2, Argument3)
```

There is a limit of 15 arguments, although each one may be up to 64k long. You are more likely to use function hosts when you want results returned more efficiently.

Even though the two types may hosts appear quite different from within ARexx, they are very similar in their inner structure. All that is involved is a port and a mechanism to get and process the message. In fact, there is no reason why a host could not be both a command host and a function host.

The differences lie in the contents of the ARexx messages, rather than in the ports. The ARexx message is a 128-byte structure that has several data fields.

These tell us what type of message it is, what instruction it represents, what arguments it may have, whether it wants a reply, and much more. It is (indirectly) possible to get all the information about the current state of the ARexx system from any single message.

When designing an interface for an ARexx host, the important thing is how you recognise and treat incoming messages. Some of this work is straightforward, and some less so, but there is nothing really difficult.

Figure II shows what the message structure looks like in C; note that the name of each field begins with "rm_":

Don't panic if you don't understand the C notation. Next time we will explain these fields more fully, and also write a small program to demonstrate their use – without using any C!

We will also see how the system allows you to mix pure ARexx code with "host code" by passing messages back and forth. We have already given some hints on this today.

We will also be including a small utility that monitors messages sent to the REXX port – a great help for visualising what is going on. See you then.

```
struct RexxMsg {
    struct Message rm_node;
        /* Identifies message as valid Exec message */
    APTR    rm_TaskBlock;
        /* Explained later */
    APTR    rm_LibBase;
        /* Explained later */
    LONG    rm_Action;
        /* What kind of message is it? */
    LONG    rm_Result1;
        /* Main result (return) code of message */
    LONG    rm_Result2;
        /* Secondary result code or
           pointer to result from functions */
    STRPTR rm_Args[16];
        /* an array of 16 slots for the main instruction
           and any function arguments */
    struct MsgPort * rm_PassPort;
        /* pointer to another port   explained later */
    STRPTR rm_CommAddr;
        /* The name of the Host Port */
    STRPTR rm_FileExt;  /*  ---------  */
    LONG    rm_Stdin;   /*  Explained  */
    LONG    rm_Stdout;  /*   later     */
    LONG    rm_avail;   /*  ---------  */
};
```

Figure II



your interface

All sorts of information can be sent from program to program if you write an ARexx interface to do it. Alex Gian demystifies the whole subject



It's make

It's in the can. It's a wrap. In other words, it's finished. Actors and crew leave, with anticipation building for the final result. It's all gone well and the footage looks promising. Reaching for the Yellow Pages, your fingers do the walking to the Video Services section, the words editing suite hanging in your mind...

A mass of adverts greet you, each trying to grab your attention. Picking up the phone, you systematically dial each one. The more quotes you receive, the stronger the urge to slam down the phone and call it a day.

"It'll cost £400", "£230", "£250 an hour with the Avid system, sir." Feeling numb, you replace the phone and start to reconsider your future career.

Post production is the next stage to filmatic perfection where the video can be made or broken by the pressing of a few editing buttons. As you probably discovered for yourself before the shoot started, professional editing suites cost a rather healthy amount of money to hire.

A far wiser idea is to invest in your own editing system to be used in conjunction with your Amiga – a very versatile machine ideal for video use because of cheap genlocks and all the accessories available. Check out the two editing suites reviewed elsewhere in this guide for further details.

Once over this hurdle, the job of finishing the film can begin. First of all, it's advisable to sit down with all the rushes and logging sheets and go through each tape. Choose the takes you want to use for each shot and mark them down on the logging sheets.

This saves you time while editing and if you ever do decide to go for the full professional suite, it'll save money as well.

The editing process is split into three significant stages – the rough cut, the second cut and the final cut. Imagine an out-of-focus shot and through the editing the image slowly comes into shape to create the final picture.

The rough cut is simply an opportunity to grab the shots that you want to use and slap them down on tape in the right order. No attention needs to be given to the exact timing of the cuts at this stage.

The main concern is to simply see it in the order you initially think is right which may highlight any changes that need to be made. Remember, as with the shoot, you don't have to stick to the storyboard rigidly – if certain shots look better in another place, try it now and experiment a little.

For the second cut, start to tighten up the shots and clip away at the frames. You'll be surprised even after this stage that you'll spot places where the video can be tightened further.

The final cut is where everything comes together, all the mistakes made right and corners cut as finely as possible. Then music is laid and the titles put in their beginning and end positions. One of the main principles of editing is to always cut on the action whether it is physically or dialogue based to carry the edit. It moves the story along, giving the proceedings a rhythm and pace that involves the audience more.

Secondly, it's necessary for one piece of action/shot to cut together accurately with the next. The tendency among beginners is to try and exactly match the point which is cut from with the proceeding shot.

For example, imagine a fist pulling back to hit someone and just as it launches forward we cut to it from a different position as it makes impact on the victims nose. For the best method in most cases for getting the perfect edit, cut as the fist has started to launch.

SECOND IMAGE

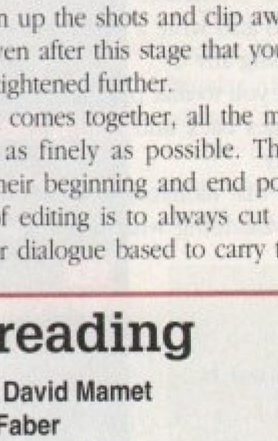
Then, instead of trying to find the exact point that matches in both shots, advance the second image by a few frames past the point. When cut together, you'll see that this slightest of "jump" cuts makes the action flow better and more fluently.

If the question of choosing between good acting but dodgy camera work and vice versa should arise, go for the acting – a solid performance can carry a film more than fancy shots.

One element that can be often overlooked is sound. There

Essential reading

On Directing Film • David Mamet
Faber and Faber
£6.99



An excellent, readable book that takes the reader through the basic principles of filmic storytelling, from one of the world's most acclaimed movie and theatre directors.

British Film Institute Film And Television Handbook £14.95

For videomakers who want to go a stage further, this encyclopaedia of up-to-date names and addresses of production companies, competitions and much more is a must- purchase.

The editing suites

Buying any video equipment is going to set you back ample lumps of cash but fortunately the Amiga is a very video friendly machine. Listed below are two examples of the sort of packages that can be bought to help with editing your masterpiece.

Edit Mate

Supplier: Meridian Distribution
Phone: 081-543 3500
Price: £199.95

An ideal starting block for the amateur, Edit Mate is a simple but effective editing tool. By reading your video recorder's tape counters, Edit Mate allows the user to simply choose the IN and OUT points of the edit and let the machine do the rest.

The main downside is the frame accuracy – three to five frames out is the average miss rate. This may not sound like much but it renders the system pretty much redundant for professional work where precision is absolutely necessary.

On the other hand, for rough cuts and the firs





Posters, titles and video cases

When the editing has finally been finished, it's important to make the packaging and credits as polished as the contents of the tape.

Investing in a colour printer and a DTP package such as PageStream 2.2 (v3 to be released soon) gives the opportunity to produce some top-notch video covers and mini posters.

Titling can be done easily with the Amiga either using a basic paint program to create flick sheet titles or for some hard-earned cash, Big Alternative Scroller II (around £60) or the Scala Home Video Titler (around £80).

As you've probably gathered by now, the business of video creation is an expensive one even at the lower end of the market. *Amiga Computing*'s advice is to keep reading each month for information on the latest developments, to stay in the full picture!

are only two channels for music, dialogue and other effects so plan where and what you use carefully beforehand. If you're in a lucky enough position to have a sound mixer, then tracks can be mixed together and life becomes a whole lot easier.

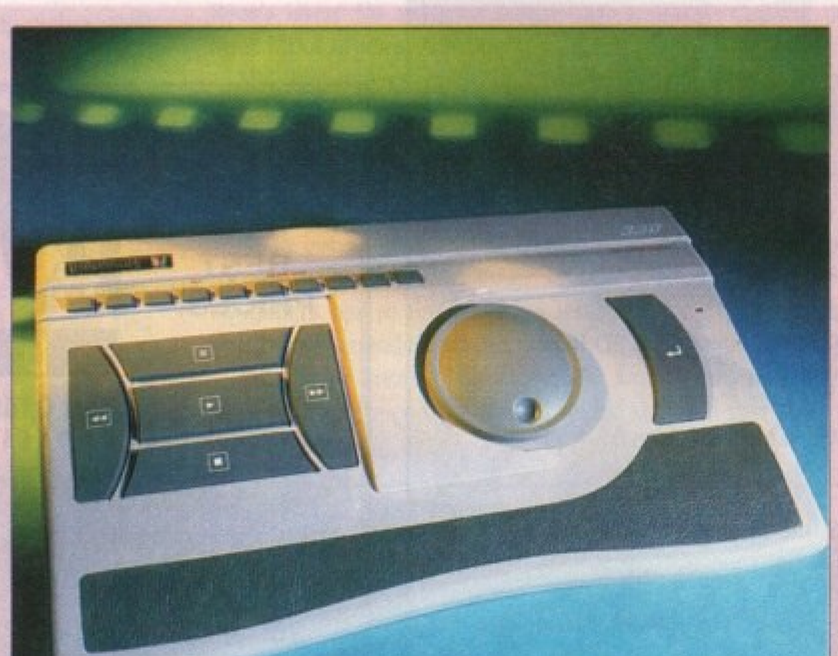
Once the final cut is done, show it to the cast and crew first and then to everyone you know, enter it into national and international competitions, get it certified by the BBFC and ask your local video store to stock it as a free rental vid for the interested punter, get interviews with local magazines and newspapers, start a showreel and look for a break in the industry – the choices are many and varied.

Above all, enjoy the success created through your hard work, learn from mistakes made and keeping shooting videos. Good luck!

or break time

In this double-page special, Adam Phillips winds up with the final reel of the video making story

few videos, this may well be the system for you – to find out if you actually enjoy the experience before ploughing money into Videopilot.



Videopilot

Supplier: To be anounced soon
Price: approx £1,000

For the budding professional videomaker, Videopilot is an excellent system for achieving solid results. While the cost may bring tears to your eyes, the machine is worthy of the price tag.

Coming in a smartly designed casing with full tape manipulation facilities, it also boasts a highly useful shuttle facility which enables the user to flick through the frames on at a time for optimum accuracy.

Up to four VCRs can be attached to the unit and once hooked up, can be operated solely via the Amiga and Videopilot. The software that comes with the package is simple to use and of a high standard and includes a basic titling system as the icing on the cake.

Videopilot is also compatible with the different timecode systems found on VCRs. When taping, many video recorders lay down a running time on the tape as they record. These come in various formats – VITC (Panasonic), RCTC (Sony) and LTC (used by many home videos and camcorders).

While having many features to tempt the potential buyer, there are downsides. The Videopilot cannot perform cross fading between two images and can't even achieve a fade to black. To lay your hands on these extra capabilities will require another handout for the appropriate hardware.

The other problem is that some recorders don't lay time codes and therefore editing with tapes used by them are useless because the editing machine has nothing to read and align with.

There are two solutions to this problem – either copy the tape on another machine that does lay down a time code which leads to a loss in generation (the quality of the picture suffers) or have your video recorders modified so that it becomes LTC-compatible. This will cost you £100 for the conversion and make any warranty that you have redundant.

If this all sounds like technical jargon then make sure that you contact the dealers to get solid advice about your particular requirements.

Overall, the financial sacrifice is worth the end results – with editing accuracy being between one and three frames, this is the best system that money can buy within the price range.

The Midi jungle

Confused about channels and Midi equipment links? Paul Overaa explains what's what



The Amiga collects Midi data via the serial port but to get the right electronic and cabling connections you have to use something called a Midi interface, the cheapest of which as you'll probably know cost around £20 and are available from many Amiga dealers.

With simple systems you take one Midi lead from the Midi Out terminal of the synthesizer (or whatever it is that you are using) and connect it to the Midi In terminal on the interface.

Assuming you also want to play back your recording, you then need to take a second lead from the Midi Out terminal of the interface and connect it to the Midi In terminal on the synthesizer.

Recording is simple. You just load your sequencer program, set it into record mode (every sequencer has a different way of doing this) and play. Whenever you touch the keyboard, or alter a control, your synthesizer will transmit digital messages (Midi messages) – and it is these messages which the sequencer will store.

Songs can be created piece by piece using multiple sequencer tracks and by selecting the sequencer's play option (again all sequencers have different ways of doing this) copies of all of the recorded messages can be sent back to the synthesizer. The result? The synthesizer will use that Midi data to recreate everything you've played.

It is also possible to build Midi systems that contain many more instruments (extra synthesizers, drum machines and so on) and up to 16 different units can be linked together on a conventional system.

SELECTIVE

This is because Midi recognises the existence of 16 separate channels and certain messages, called channel messages, contain a channel number embedded within them. Each piece of equipment can therefore be selective about the messages they respond to.

It's a bit like someone writing a letter to you, sticking it in an addressed envelope and posting it. The letter, along with a great many others, gets moved around the postal system but the contents are essentially ignored until the letter arrives at your door.

You know the letter is for you because it has got your name and address on it – a Midi unit will know when a suitable channel message arrives because it will have a channel number identical to the channel number the unit has been set up to respond to.

This selectivity means that, in theory at least, it is possible to have say your Amiga sequencer, a dozen synthesizers, plus a few drum machines and sound effect units, all linked together (via their Midi In and Midi Thru ports) using what is effectively a giant Midi cable loop. I say in theory because there's a snag in that every time a message passes through a piece of Midi equipment a slight deterioration in the signal quality (and a small time delay) occurs.

Some Midi interfaces provide multiple Midi Out terminals specifically to solve this problem but another solution is to use a device known as a Midi Thru Box. These allow you to turn a single Midi Out connection into any number of outputs so that each instrument can then get its own copy of the Midi messages coming from the interface. The result? Signal quality is better and time delays are eliminated so there's less chance of any communications problems arising.

Philip Rees specialise in these types of units and now provide an extensive range of boxes. The smallest device offered provides three Midi Out terminals, it's called the V3 and is battery driven. Further up the scale comes the mains powered V10 which has its own built-in transformer/power supply and drives ten Midi Out terminals.

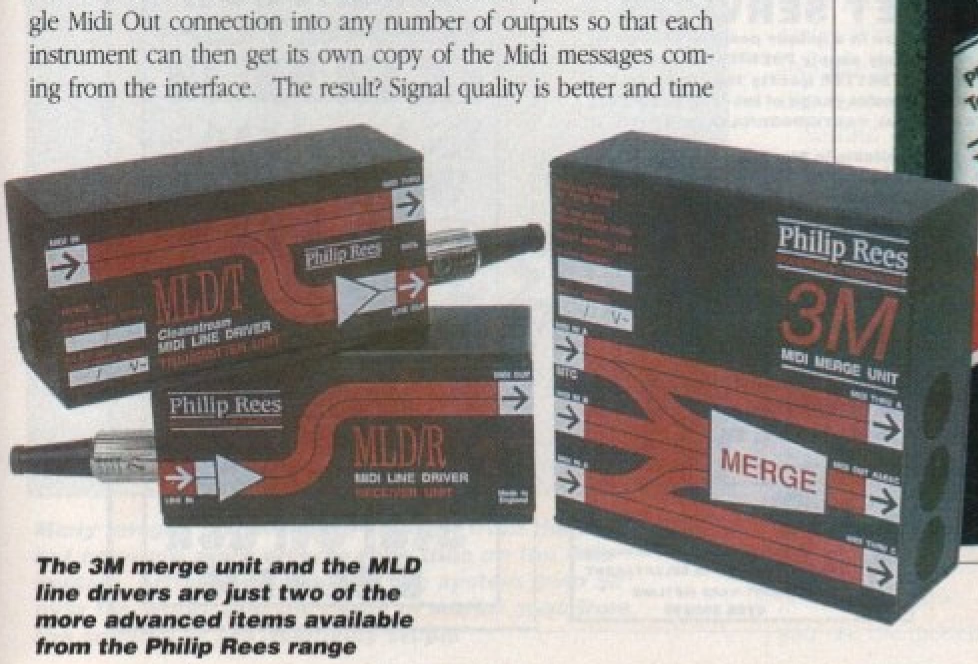
There's not a lot you can say about Midi Thru boxes themselves, other than the fact that they work. Basically you plug them in and forget about them, it's as simple as that.

The same company also produce many more specialised units for merging and routing Midi signals. Even merging two streams of incoming Midi data into one is not quite as simple as it might seem but Philip Rees's latest 3M merging device can actually combine up to three input streams.

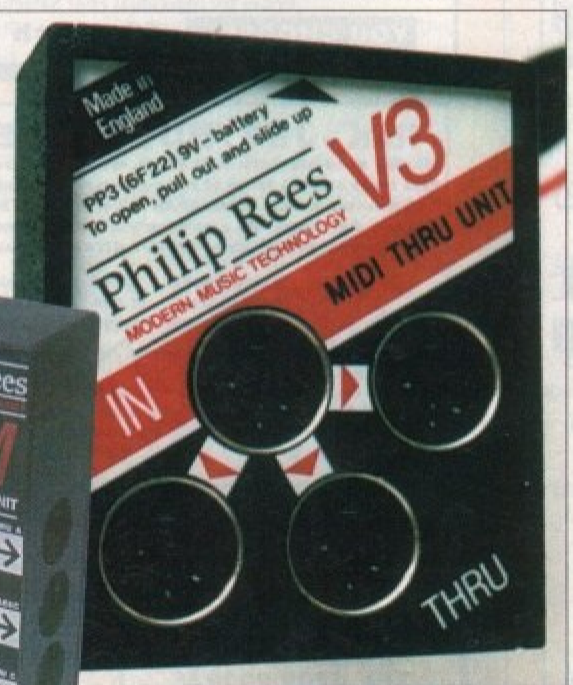
Midi line driver (MLD) units that can support Midi links of up to one kilometre (the normal cable length limit is about 15 metres) are also available.

Why would you need to use such long cable lengths? Well, unless you use Midi professionally you wouldn't but these gadgets do get used by live bands, in recording studio control rooms, theatres, and in other situations where the sequencer equipment has to be situated a long way from the actual Midi gear being controlled.

You never know – the musicians among you now happily building home recording studios might also find that MLD units come in handy!



The 3M merge unit and the MLD line drivers are just two of the more advanced items available from the Philip Rees range



The V3 Thru box can convert a single Midi Out connection into three separate outputs

Prices

V3 Thru box	£14.95
V10 thru box	£39.95
3M Merger	£99
MLD line drivers (per pair)	£89.95

Philip Rees: tel 0608 811215

Net surfing

Comms nut Phil South takes the plunge and teachers netters how to surf

The email boxes have been fair buzzing themselves off the wall this month, and so I thought I'd take another opportunity to check out the mail I've been getting electronically.

If you want to send me some email then feel free, but do try not to clog up the airwaves with "hello, I just thought I say hello as I've got nothing better to do. blah blah waffle".

Think about email as if it were a letter or a phone call. Introduce yourself briefly, are you a reader, what computer you use mainly, and then for goodness sake get to the point.

I'm getting tired of huge messages about all the computers that you've ever owned, what you mate said about me the other day and who you're going out with at the moment.

This is a waste of bandwidth, not to mention my time. If your email is bigger than a screen's-worth of text, then most people's eyes start to glaze over unless it's really very interesting.

Don't also cross-post huge documents from other sources. Send them on disk if you must. Right, that's the comms style guide over with, let's dive into some post.

Richard Borrett <R.Borrett@herts.ac.uk> says:

"I have just started to use the computer systems at the University of Hertfordshire and currently I am just playing around with the system, albeit carefully. I just happen to write to you because you happen to work for my favourite computer magazine, *Amiga Computing* and you are the only address I have outside Hatfield.

"I am currently using the FTP system, and I am wondering whether I can use direct phone numbers to contact various bulletin boards. I appreciate that you may be busy, and sending messages is expensive, but a reply would be most helpful."

Well, replying costs virtually nothing most of the time, so I'm happy to talk to you about BBS. You can't dial up any external BBS, unless of course you have your own Amiga, phoneline and modem.

Unless a BBS is part of a network, like Fidonet, you generally have no way in from the outside, and even if you did it wouldn't be the same as logging on.

Some BBSs like CIX allow you to log on from external systems by TELNET, but most systems which allow this charge you for using the system. Next is Christopher Bridge <C.K.Bridge@mcs.salford.ac.uk> who wants to know:



"At Salford University all the students are given the use of Internet and FTP like most Janet Sites. Mainly I am striving to get useful ftp and exciting Internet numbers or addresses. Useful, being for my Amiga obviously.

"What I am looking for is a good site to get GIFs/BMPs/PCX, New Utilities, New Music Modules and also one with a simple file structure so that I don't have to spend half my time roaming around.

"I have got several hundred addresses from an Ftp site but I don't have the time to go through them finding the best as I go. (A lot of essays to do you know!)

"A good site which I do know is <grind.isca.uiowa.edu>. Do you know of this one? Is it possible for a PC here at the University to call up an Amiga-specific bulletin board, ie one run on an Amiga? I think the answer is obviously no but you've got to try.

"What is the average weekly cost of your phone bill? All the magazines I read only tell you about the price of the modem, the best ones to buy etc, but none answer the most important question that of phone bill costs. What if you're on the modem and someone is trying to call your house?"

As far as good sites, there are literally thousands. I use the US sites <wuarchive.wustl.edu> and <wcarchive.cdrom.com> a lot, and also <ftp.funet.fi> which is in Finland.

Most of these I picked up the addresses for from recommendations from other Net users. A little bit of detective work, you see, a good skill to develop if you want to be a really useful Net user.

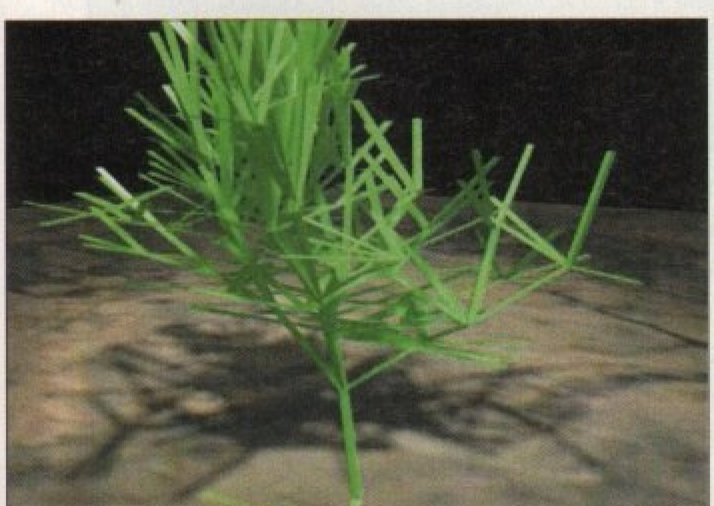
All these sites have EXTENSIVE files from Aminet and other Amiga related stuff, as well as lots of other cool stuff. You might also like to try Imperial College, on <ftp.doc.ic.ac.uk> as they also carry a lot of useful stuff.

Second question, yes you can dial up the Amiga BBS with your PC. You can even download programs but of course you have to transfer them to the Amiga before you can run them.

Weekly costs for my phone bill are greatly reduced since I got a 14,400 baud modem, and besides I work from home and so my phone bills are about £100 a month anyway, whether I use the modem or not.

Off-line readers are a boon if you can get one for systems that you use. They reduce on-line time to the minimum. If you are using the modem and someone calls your house it will give an engaged tone the same as if you were talking on the phone.

The phone doesn't distinguish between speech and data, as they are both sounds being sent down the line. Unless you've got multiple lines you will be holding up the phone whenever you use the modem.



Many images are available on sight from the Net, but none are more diverse than thos on the Otis system. Artists contribute to the system from all over the world, and the range of works goes from the sublime to the positively stupid

Write stuff

Write to me Phil South, Comms Column, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP. Or how about dropping me some email on:

CIXsnouty@cix.compulink.co.uk
Direct connection
snouty@dircon.co.uk
Compuserve 100102,1500

Routine stuff

Phil South exploits his connections to bring you some of the very best Amos routines

Programming in Amos isn't so much a bit of coding, more a way of life. Once you first start meddling about with graphics and sound, and crack your first bit of maths for collision detection, you're off. Nothing can stand in your way.

I recently took delivery of a mail sack from the *AC* office. Wow. All those bits of paper and disks, all of them either saying what do I do from here with this buggy bit of code that I'm currently banging my head on, or look at what I've done, isn't it brilliant? The two groups really ought to get together, I think.

Someone who belongs to the latter category is most definitely one Steve Bennett, who sent me a number of excellent routines for you to see, some of which I've included in this issue.

Steve has grasped a fundamental truth about Amos. It's the computer programming language for people with imagination, in the same way that C is the language for people with calculators hard wired to their foreheads, and assembly is the language for people who if you look closely you can see little 0s and 1s in the pupils of their eyes...

Steve has some very useful routines that he uses and he's given me permission to reprint some of them here. The first is a way of doing something in Amos Classic that you formerly could only do using Amos Pro.

As Steve said in his letter: "One of the few things that I like about Pro is the way in which you can create outline text, which I think adds a lot to the look of buttons, etc.

"I was thinking if it would be easy to create the same effect using Classic. As it turned out, it is very easy to do...":

```
Rem Amos Outline Text Routine
Rem By Steve Bennett
' I    - Ink Colour
' B    - Background Colour
' O    - Outline Colour
' X    - X Pos
' Y    - Y Pos
' Txt$ - Message
Cls 4 : Flash Off
Ink 0
Box 100,100 To 200,115
Ink 2
PolyLine 100,115 To 100,100 To 200,100
_OUT_TEXT[2,4,0,106,111," Button It"]
_OUT_TEXT[2,4,0,20,40,"Simple Outline Text Routine"]
_OUT_TEXT[3,5,0,20,60,"That's Easier To Do Than I Thought"]
_OUT_TEXT[2,5,6,20,80,"It would be using Amos Classic!"]
Procedure _OUT_TEXT[I,B,O,X,Y,TXT$]
   Gr Writing 0
   Ink O,B
   Text X-1,Y,TXT$
   Text X,Y-1,TXT$
   Text X+1,Y,TXT$
   Text X,Y+1,TXT$

   Ink I,0
   Text X,Y,TXT$
   Gr Writing 1
End Proc
```

Next a couple of really cool utility programs which check the state of your two most valuable peripherals, your printer:

```
Rem Check Printer Status
Rem By Steve Bennett
P$=Hex$(Peek($BFD000))
If P$="$FC" Then Print "Printer Is Online"
If(P$="$FD") or(P$="$F8") or(P$="$F9") Then Print "Printer Is @l =
Offline"
If(P$="$FF") or(P$="$FB") Then Print "Paper Is Out"
```

and your disk drives:

```
Rem Check Disk Drive Status
Rem By Steve Bennett & Jonathan Parish
If Length(4)=0
   Reserve As Work 4,36 : Rem * bank for disk status check *
End If
_CHECK_DRIVE["df0:"]
P=Param
If P=80 Then Print "Disk Is Write Protected"
If P=81 Then Print "Validating Disk"
If P=82 Then Print "Disk Is Ready To Save Data Onto"
Procedure _CHECK_DRIVE[DR$]
```

And lastly, a routine which gives you multiple bobs whizzing left right and centre all over the screen:

```
Rem Screen Switching Multi Bob Effect
Rem By Steve Bennett
Degree
For T=0 To 4
   Screen Open T,320,256,16,Lowres
   Flash Off : Hide On
   Get Sprite Palette
   Cls 0
Next T
NUMBER=1 : Rem ** This is the Bob Image which is
used first **
T1=-180 : OFFSET=180
Repeat
   Add A,1,0 To 4
   If OFFSET=0 Then OFFSET=-90
   If OFFSET=-180
      Repeat
         For R=1 To 50 : For T=4 To 0 Step -1 :
Wait Vbl : Screen To Front T : Next T : Next R
      Until Mouse Key
      Default
   End If
   Wait Vbl
   Screen To Front A : Screen A
   Paste Bob T1-20,(Cos(T1+20)*OFFSET+120),NUMBER
   Add T1,2 : If T1=>340 : T1=-90 : OFFSET=OFF-
SET-30 : Add NUMBER,1,1 To 5 : End If
   Until Mouse Click
Default
```



I particularly like the sine wave motion of the bobs as they move across the screen. Can you think of a way of making the bobs move further apart and have their own sine wave motion as they move along the sine wave path? A sort of wiggle within a wiggle! Try it and see, and why not send in your best ideas?

Keep in touch

If you have an Amos question or even a routine or two you've written which might be of interest to other Amos coders, then why not send it in to: Phil South, Amos Almanac, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

Too big to print!

Now as you can see from the above, Steven is a very good Amos coder, which is why – I'll come clean – he's a constant contributor to *Totally Amos*, and why he's produced *Understanding Amos 2*, his own book-on-a-disk.

This program shows you how to do certain basic things like using joysticks, bobs, the mouse, and it's available from all your usual Amos disk dealers. Get it now and complete your Amos disk tutorial collection. It answers all the most frequently asked questions about Amos.

Steve has also written a utility program to create Zones, as I asked in a previous edition of *AC*. Even though this is too big to print in the magazine, I'll endeavour to put it on a forthcoming CoverDisk, along with the source code of that and some of Steve's larger and more impressive code. Well done, Steve, and thanks again for letting us see this great work.

Typecast

Whether it's dot-to-dot or point-to-point, Ben Pointer puts you in the font editing picture



She keeps telling me I'm becoming an ill-tempered old so-and-so. Enough of the old, I growl. Hurling abuse at the poor defenceless monitor is the cause of her accusations, but I do have good reason. Oh yes I do!

Like anyone who uses their hard-earned money to buy software, when I discover this software isn't all it should be I get just a mite upset. And ropy outline fonts are no exception.

I suppose I shouldn't complain, as you do get what you pay for, and these fonts don't cost much at all, but more than once I've bought a shareware font, got it home, installed it, and when I've gone to use it I've found the spacing between the characters is all up the creek. Or it's missing some characters. Or it's just plain knackered. Not the sort of font you want for producing professional looking documents!

But I have a secret weapon to sort out these wretched critters, an outline font editor called TypeSmith. Armed with TypeSmith I can quickly make corrections to the font and then get back to what I was doing. I have found this to be more productive than hurling abuse at my monitor, which hasn't done anything wrong. Yet.

You, too, will no doubt have taken advantage of the wide variety of PD and shareware fonts. Ah, but there's nothing like rolling your own. Or, when a font doesn't look right, having the tools on hand to clean it up.

If you're working with outline fonts, you need TypeSmith. After having it at my beck and call for more than a year now, I've grown to depend on it being there.

CONVERTING

TypeSmith's uses are manifold. The obvious use is for converting between font formats. If you own PageStream you will have probably bought a load of PostScript fonts for it. But what about all those programs that use Compugraphic fonts? Buy a load more in that format? Nah, TypeSmith will convert them.

You can also convert Compugraphic to Compugraphic. Confused? Well, say you have both ProPage and Wordworth and you've bought a volume or two of Digita's Compugraphic fonts to use in Wordworth.

When you install them and see how useful they are in Wordworth, you decide you want to use them in ProPage, but you can't because ProPage uses a slightly different format. TypeSmith to the rescue.

TypeSmith will also enable you to create bitmap fonts from PostScript or Compugraphic ones – useful for creating fonts for use in programs that don't support outlines, like older versions of DeluxePaint for example.

Something I use TypeSmith for quite often is to create bitmap fonts for PageStream. If you've used PageStream with PostScript fonts you will know how long it takes to display them, but PageStream can also make use of the ABF, the bitmap equivalent of a PostScript font, which it can display much, much faster. TypeSmith does it again.

But enough of converting fonts. How about we get a little bit more ambitious and create some fonts of our own? Come back here you chickens! I'm not talking about sitting down at a drawing board and painstakingly designing a whole new typeface, I'm talking about special purpose fonts.

For example I recently need some fancy dropped capitals for a document. I found the best way forward was to create the capitals in Art Expression, save each letter as a DR2D drawing and then import these into TypeSmith, where I was able to add some finishing touches.

There's more. Reading through magazines you may notice selective use of symbols — things like arrowheads, end of article markers, question and answer symbols, and many others. OK, there are a plenty of these types of fonts available, but it's so easy, why not draw your own?

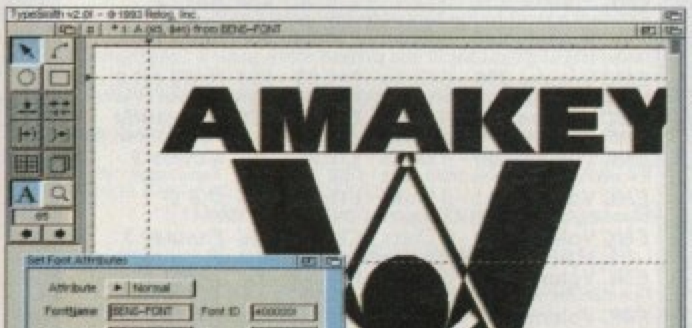
They can then be used in all your publishing work and will be like hidden signatures. Why use what everyone else is using? Be original! Just be sure to keep the symbols very simple and no-one need ever know you can't draw for toffees.

Logos are another example of a special purpose font. You might for instance have 15 different clients who will all have different logos. Using TypeSmith these can be placed together in a single font. No having to go looking for them all over the place, all there in the one font, just a single keypress away.

If you find drawing on the screen a little difficult you can take the easier route of drawing something on paper, scanning it at a high resolution to get a large bitmap of it, and then use TypeSmith to auto-trace the bitmap.

Now, I don't generally recommend auto-tracing as it can make a right cock-up of things at times, and I'm not just referring to TypeSmith's auto-trace feature but any auto-trace program. However I have been known in moments of desperation to use auto-trace to get things like signatures from paper to font.

No doubt there are a whole host of other uses for TypeSmith. Like any drawing or painting program, after you become experienced at operating it, the only limit is your imagination. I wonder sometimes how I ever did without TypeSmith.



By using a drawing program like Art Expression you can create a series of fancy symbols and then import them into TypeSmith to create a fontful of them



TypeSmith is what you need to patch up those ropy fonts, like this one where the spacing has gone to pot

E.M.COMPUTERGRAPHIC

THE U.K.'S NUMBER 1 AMIGA FONT AND CLIPART DISTRIBUTORS - AMIGA COMPUTING ISSUE 52

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Full details are included in the EMC information pack.

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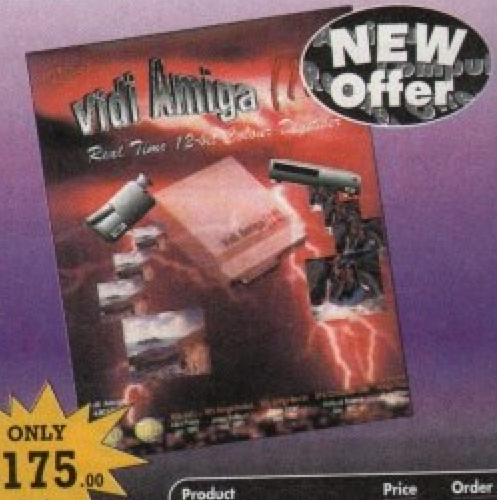


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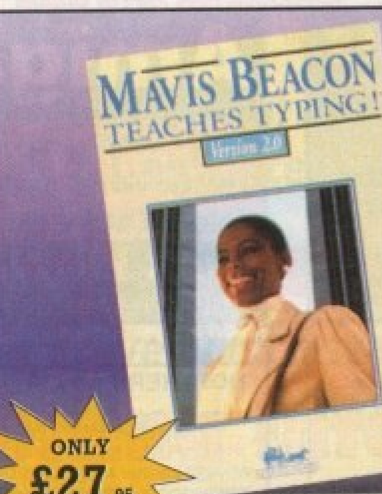


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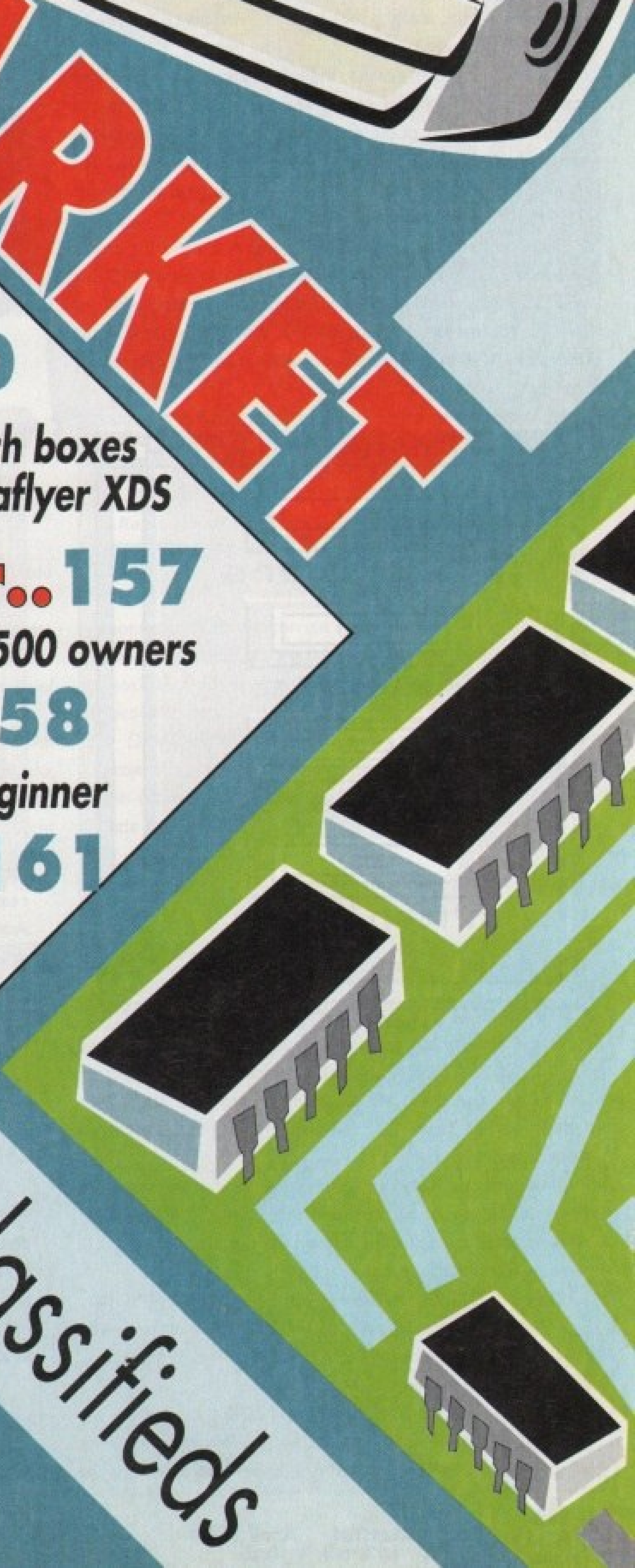
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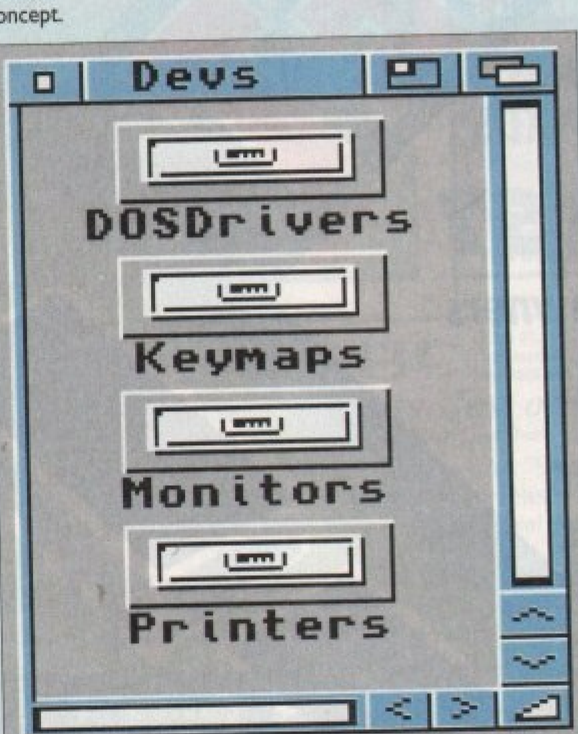
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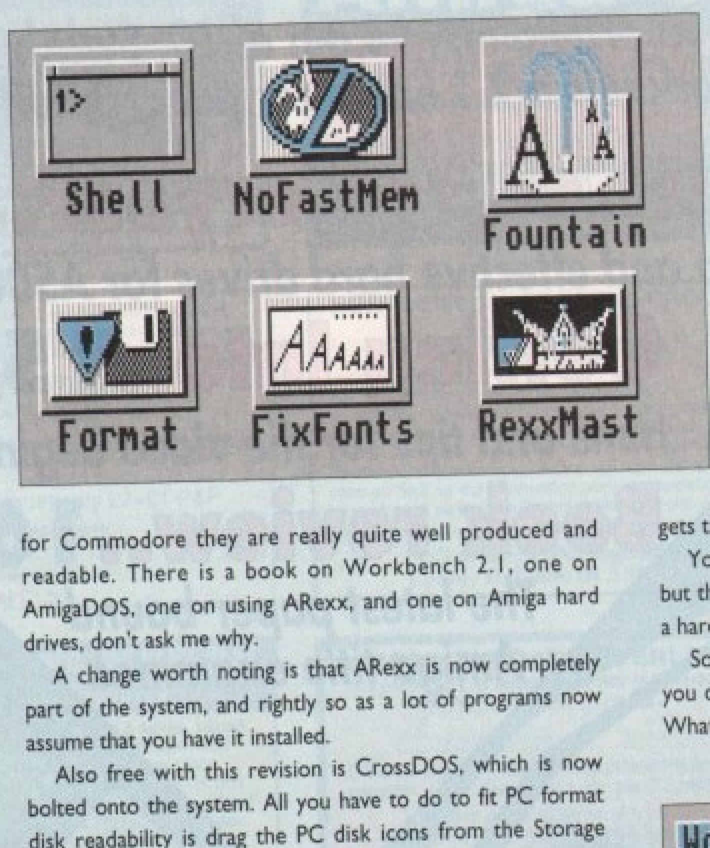
Commodore's official Workbench 2.1 upgrade, promising WB3.0 facilities to 2.04 users, is finally available

Just when you thought it was safe to consider yourself complete when it came to upgrading and all that, along comes another Workbench for you to look at.

I have a number of Amigas, and I don't know about you, but I can't really be bothered to upgrade them all the time to the ultimate spec. Most of the machines I have are WB2 machines, although one is still 1.2! I do have a 1.3 chip lying about but you know I just can't seem to find the time to change it, and besides I'm kind of nostalgic for the old beast.

Now it happens that I already know a little bit about Workbench 2.1, and that is because I have a book on WB 3.0, the OS which you find in your common or garden A1200 or A4000. You see the simple fact is that 2.1 is 3.0 without all the frilly little AGA bits, which as a non-AGA man I find a tantalising concept.





Inside the huge box you get a lot of packing, five floppies and four books. The floppies are Install, Workbench, Fonts, Locale, and Extras, and these are all spooled onto your hard drive (which is a requirement for this version) using the Workbench Installer program.

Simply run the Install program from the icon on the Install disk and the rest is automatic. If you have Workbench 2.04 installed on your machine the system will overwrite it and install the new OS over the top of it.

Sadly this OS will only work if you have a WB 2.04 ROM in your Amiga. If your machine is a 3000, 500 Plus or 600 then you have this already (if you buy an A600 now it should have 2.1 in it, so ask before you buy).

If your machine is an old A500 or A2000 then chances are you are running the old 1.3 ROMs and you'll have to buy a kit which has the ROM in it as well. The books are top notch, and for Commodore they are really quite well produced and readable. There is a book on Workbench 2.1, one on AmigaDOS, one on using ARexx, and one on Amiga hard drives, don't ask me why.

A change worth noting is that ARexx is now completely part of the system, and rightly so as a lot of programs now assume that you have it installed.

Also free with this revision is CrossDOS, which is now bolted onto the system. All you have to do to fit PC format disk readability is drag the PC disk icons from the Storage drawer into the Devs/DOSdrivers drawer.

Each time you insert a disk you will get the choice to look at it as either a PC or Amiga disk through both Workbench and Shell.

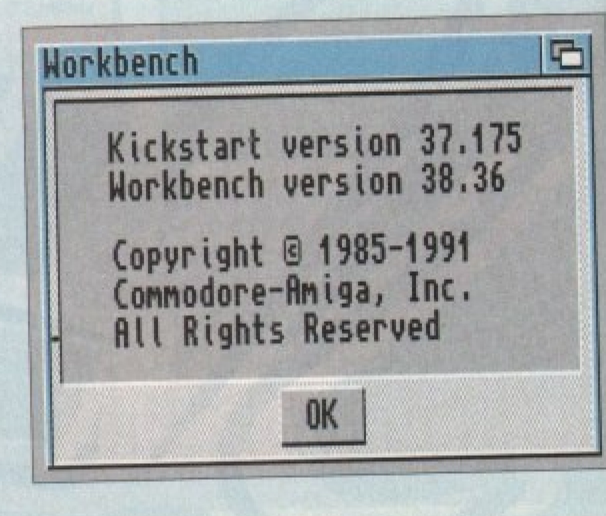
The Locale system is also included, which sets the language and time zones for your system. Printer support now also includes PostScript, which will be a welcome bonus to those people who already use laser printers for DTP.

Is it the bee's knees? Well yes, if a little late for most people. The extra features are certainly worth the money, although you might not notice a lot of functional difference if you are already used to 2.04, apart from those few little widgets to which 3.0 users are accustomed.

You can't have 2.1 if you don't have the Kickstart 2 ROMs, but this is also the first WB not to work on anything less than a hard drive. It's too big. Sign of the times I guess.

Some of us like to have the latest thing, that's a fact, and if you do then this is it. Operating system as fashion statement? Whatever next?

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Though producing a range of educational packages which lag behind others in terms of graphics and sound quality, 10 out of 10 have always released software which is well targeted and educationally focused. The two latest releases go along with this general trend.

Junior Essentials is the better of the two and covers a wide range of subjects through the use of simple games. Spelling, grammar, arithmetic, and science are covered, as are history, geography, French, and telling time.

Aimed at the 5 to 11 years age group, the two-disk set comprises of six games dealing with 36 National Curriculum attainment targets, progress in which is automatically recorded on the usual 10 out of 10 progress chart. Children are awarded one or two stars depending on their success, and up to 64 can be monitored at once.

The games themselves are well thought out, a mixture of arcade-type and more sedate point-and-click exercises. Probably the best is Break Up, an Arkanoid clone in which the pupil shoots away the bricks around a variety of answers to a question before hitting the correct answer and claiming the points. In most games, a timer can be selected to add a bit of spice, and as any one of the curriculum subjects can be the object of each game there should be enough variety to keep young kids happy for some time. High score tables and an element of customisation provide incentive if a clip round the ear won't keep them at the screen.

Dinosaurs is a slightly weaker package, though its theme should ensure that the tyrannosaurus-obsessed youngsters in the post-*Jurassic Park* period are at least interested in the subject matter.

Consisting of six games and constructed in the same style as Junior Essentials, Dinosaurs benefits from the high score tables, progress chart, and customisation of its stablemate, but the approach it takes can sometimes be a little overambitious.

If a magazine reviewer can be confused by a question which asks "Which dinosaur's name means ...?" then a six-year-old certainly can (though we shouldn't make too many assumptions about reviewer intelligence).

In other ways, though, Dinosaurs makes up for this and completing the six games should result in a child who knows enough to bore the rest of the family silly when they watch *Jurassic Park* on video.

The combination of direct multiple choice questions and games which offer a series of clues about a particular dinosaur species means that the child can bring knowledge gained from one game to bear on the next. Despite the narow subject matter, this sort of fact finding keeps the interest level reasonably high.

Over the course of this program, a child should learn which dinosaurs were carnivorous and which were herbivores, the relative sizes of the different species, attack methods, and so on.

The games used are less arcade-oriented than those in Junior Essentials, but the Spare Ribs, T-Rex, and Lost Island sections should provide monster fun for your own little monsters. With the current craze for dinosaurs still rampant, this package could be a gentle child-friendly introduction to the notion of education through the Amiga, and as such it is recommended.



T.Rex is one of six games designed to teach children more about big lizards

Dinosaurs fits well with the sort of general knowledge projects carried out in Junior Schools all over the country and can either stand on its own or as a package to return to when little Tarquin starts to tire of the three Rs.

STEVIE KENNEDY

Workbench through the years

1.0 Only used in early Amiga 1000s. Used a Kickstart on a disk and was really a very hard-to-use piece of software. It fought back, like a good OS should. Sod this easy-to-use lark, that's for wussies.

1.2 Early A500 and A2000 machines. All the bugs were ironed out, but people still wanted more for their dosh. Windows was making us feel a bit peeved too, so more oomph! was wanted.

1.3 Late model A500s and A2000s. Now we had command history in AmigaDOS, and Workbench was a little bit smarter, although it still looked pretty much the same as before. Deep blue background and white borders. Looked kinda tacky, like a silly PC or something.

2.0 The Amiga 3000 broke the mould. We had seen the future, and it was light grey and blue. But again is was Kickstart on disk and bugs galore. And yeah, where was the WB 2 upgrade kit for us real Amiga users, eh?

2.04 The ROMs were cast in stone. A proper working A3000, and the A500 Plus. Then by way of a taste of things to come the A600, which was half the man the A1200 was going to be.

3.0 The A1200 and A4000. You can now also have pictures in up to 256-colours on your Workbench. It eats memory like a hungry pig with a stomach extension. But it has Locale. So what?

2.1 Hang on shouldn't this come before 3.0? This is WB 3 for the masses. The masses of people who already have Amigas. All the tricky technical stuff of WB 3 without all the AGA stuff, like pictures in your windows and backdrop. Bastards.

4.0 Soon to be launched onto a fully suspecting public, the ultimate OS for the 90s, something which makes Windows look like a PC operating system. How far can you go with cosmetic enhancements?

Shop Window

Data switch boxes

Parallel, serial, and monitor switch boxes for all Amigas
Supplier: Lightwave Ltd
Phone: 051-650 5003
Price: Call

Switch boxes are unglamorous, unexciting, and go almost unnoticed by most users, but they are as essential as a mouse to many productivity setups.

As the peripherals start to pile up, the situation will soon arise where more than one commonly used piece of kit demand to use the same port.

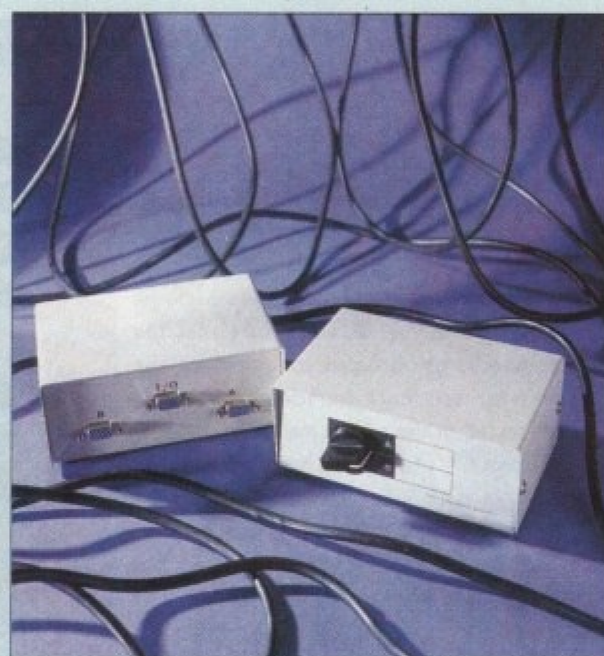
Scanners which use the parallel port are the usual culprits, competing as they do with printers, and anything which tries to hog the serial port, such as a dongle for an expensive piece of software, will clash with a modem.

Data switch boxes come in all sizes for all sorts of ports, and the range distributed by Lightwave covers just about everything. The units we looked at included the serial, parallel, and monitor boxes, and straight away the monitor switcher came in handy as a switch between the normal Amiga display and the Retina 24-bit card's output.

Normally, one would have to either use two monitors (one attached to the Amiga, the other to the Retina's RGB port), or the monitor swapped over every time an image was displayed on the Retina. With the switcher box, you just connect the monitor to the box and use a couple of RGB leads to connect the box to the two video ports.

Hey presto, all you have to do is flick a switch to view any Retina image. Lovely. The switch boxes are very sturdily constructed in steel and use quality rotary switches which give the impression that they would last a lifetime. Other touches include full shielding and gold plated contacts, plus little rubber feet to stop the boxes sliding across the desk.

STEVIE KENNEDY



DataFlyer XDS

External 3.5in IDE hard drive kit for A600/A1200
Supplier: First Computer Centre
Phone: 0532 319444
Price: £54.99 (hard drives optional)

The advantages of a hard drive are numerous but it seems that the larger the hard drive the quicker it fills up and eventually you find yourself constantly shifting programs and data in order to maximise the space.

What many A600 and A1200 owners might not know is that the IDE interface in their machines can control two drive units if only a second one could be fitted inside the Amiga's tight plastic casing. First Computer Centre think they have the answer in the shape of the DataFlyer XDS, an external box which uses the internal IDE interface.

The DataFlyer features a lightweight metal case complete with ribbons and software but although the manual is fairly clear, actually fitting the kit into the machine is a nightmare.

It is not a simple task and certainly not recommended for Amiga novices as it requires a great deal of fiddling inside the machine. The actual ribbon plugs into the IDE port on the motherboard and exits through the PCMCIA slot.

There is an additional IDE connector on the ribbon so that you can attach your own drive. This may sound simple in concept but when it comes down to the practical, things rapidly get very difficult.

In order to feed the ribbon through the PCMCIA slot you need to remove the motherboard protective plate which is a real chore. The manual warns that the plate is fairly sharp and care should be taken when removing it. Fairly sharp? The plate is so sharp it would put the teeth of a Great White shark to shame.

However, once the pain of fitting was over the drive performed exceedingly well and looked at home sat alongside the A1200. There wasn't a noticeable speed increase over the built-in IDE but the major advantage of this kind of hardware is increasing the storage capacity and avoiding the use of the slow PCMCIA slot.

The DataFlyer powers from the Amiga supply but there is an optional PSU port if the load proves too great. Jumpers are also included if you want to change the power input and set up how the drive should be interpreted – either as a single, master or slave drive. This depends very much on how many hard drives you presently use and which ones are autobooting.

Provided you can put up with the installation, the DataFlyer XDS is a very useful piece of equipment that allows you to upgrade the storage capacity of your present system without having to replace your old hard drive (good news for 40Mb owners).

I would have to question its durability due to the very suspect wire connections which weren't very well secured and did tend to come away from the port connectors, but hopefully the First Computer Centre will rectify this as soon as possible.

The drive case and cables costs £54.99 and 3.5in drives can be purchased at an additional cost, the largest drive size being 420Mb.

SmartyPaints

Children's paint package for ages 5 to 14 years
Supplier: Chroma Computer Images
Phone: 0328 862693
Price: £28.50

Paint packages for younger children are a more common sight these days than in years gone by, but there are still only a few, Kid Pix being the most notable recent release. SmartyPaints is a simple package with a new twist in that it is designed with the parent in mind and can be configured for each child in the household.

The idea is based around a main menu containing a variety of the usual painting and drawing tools from where the actual



painting menu can be controlled. Parents are invited to decide which tools each child can master, and the menus which appear when that child uses the package can be set to include only those tools.

When the parent is happy that the tools are just right, "locking" the menu ensures that the configuration is saved to disk. Chroma allow each household to copy the disk for each child and each configuration, so there's no need to spend £28.50 more than once.

A PIN number feature is available so that only by typing it in can the user access the configuration screen, so parents have access and control and can leave little Jane and Johnnie to paint away in peace.

What SmartyPaints brings to the "edutainment" field is the process whereby a child can be set a number of exercises, or just left to draw freehand until the parent or teacher decides it is time to introduce a new tool.

By gradually increasing the tools available to the kiddy, a sense of definite achievement is encouraged as is a structured approach to teaching computer art.

As a bonus, by restricting the tools to the bare minimum, one can avoid the usual confused stare when twenty or so buttons spring to life on screen when first booting a piece of software, and as any teacher will tell you, making a child comfortable with a new task is half the battle.

STEVIE KENNEDY

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STARS of yesteryear

The older the better

A500 owners might have been left behind by AGA technology, but the result is that they can now pick up some real hardware bargains

Oh, how we wept when three million Amiga owners suddenly realised that the machine which had made it all happen – the A500 – was being discontinued in favour of the A1200.

Despite the apparent obsolescence of the old sea dog of the range, however, it is still the most numerous model by a long stretch and will still run the majority of modern software.

Thousands of owners have decided to hang on to their machines for one reason or another, usually through a shortage of cash, and though they may feel left out of things at times, the price of A500 add-ons has plummeted and some real bargains are there for the taking.

A quick whizz through *AC*'s advertisements should be enough to confirm the harvest of hardware goodies at silly prices.

GVP HD8+

Currently being knocked out at £199 for the 42Mb version, GVP's HD8+ has to be the A500 hard drive bargain of the moment.

Distributor Silica Systems (081-309 1111) have progressively cut the price of the drive from its near-£400 original price tag as a response to the A500 going on the back burner, and as a result the A500's fastest hard drive is now one of the cheapest.

The HD8+ has an access time of about 11ms, will transfer data at 1Mb per second (twice as fast as many A500 drives) and can accept up to 8Mb RAM in the form of SIMM modules. It is blessed with good prepping and formatting software, an excellent manual, and a reputation for reliability which would make most other drive manufacturers green with envy.

Inside the unit a quiet cooling fan and tidy layout speak well of the drive's general design, and the game switch mounted on top of the casing is a handy aid for those who use a lot of auto-booting game disks. Ally this to the SCSI through-port and you have a hard drive with all the features you'll need.

You can even slot a PC286 emulator into the drive's internal mini-slot expansion port, though whether in this day and age a 286 emulator is of any use to you is another matter entirely.



CBM A570

Commodore's long-delayed CD-ROM drive for the A500 and A500 Plus was never the success it would have had to have been to breath new life into CDTV, a task which was almost Lazarus-like in proportions, but the failure of the initial launch means that stocks of the drive can still be found selling at prices so silly they'd make the Three Stooges look like a straight act.

Silica Systems (081-390 1111) were until recently selling the unit for £150, a price which is low enough to make A570 almost a throw away freebie.

Bundled software, with nominal value almost in excess of the A570 itself, includes Sim City, Lemmings, an encyclopaedia, and the CDPD disc with hundreds of PD utilities, so new owners have a good start to their CD-ROM collection.

Hutchinsons Encyclopaedia isn't the best piece of software you'll ever encounter, being slow to use and cursed with an awful interface, but if you fancy a cheap family CD-ROM library the A570 is a good bet.

All CDTV titles will work with the drive, titles which themselves are being sold at bargain bucket prices, so for a limited outlay the user with specific education or reference needs can pick up a system with lots of life left in it.

Games are less numerous for CDTV/A570, but there are enough to keep you going if you haven't already played them on floppy, and the half dozen or so shareware CD-ROM discs around contain the bulk of all decent Amiga PD and shareware released up until about 1993.

STEVIE KENNEDY

Commodore A590

Though for long a bit of a whipping boy for those with faster hard drives, the A590 has seen an upturn in its fortunes of late as its price has dropped and various retailers have souped up the basic specifications.

Originally a slowish 20Mb IDE drive, the A590 soon adopted SCSI and was then treated to a variety of third-party drive units, usually in the shape of a spritely Quantum 40Mb or better.

The result is a tidy little unit with 2Mb fast RAM expansion capability and a through-port which fits in the A500's DMA slot for warranty-free installation.

It might seem a bit like advising a car fanatic to buy a Hillman Imp, but if all you need is something to get you from A to B cheaply and effectively, then any old British banger is better than a push bike.

A500 owners who need a hard drive but don't fancy spending £300 or more on a faster drive for a machine which is performing its swan song, the A590 is a good buy. Evesham Micros (0386 765180) are one company which in the past have revitalised old A590s with new drives, and New Horizons (0227 773177) supply the original unit for £175, cheaper than any other alternative.

For your money, you get an official Commodore product with good manuals and decent installation software – something which can't always be said for the low price A1200 HD kits we've seen over the past year.

Getting Into

The film makers

Paul Austin reveals all those videographic essentials that any would-be Scorcese should know before embarking on a career in the movies

Almost since day one the Amiga has been synonymous with video courtesy of its basic design, which makes it the ideal platform for everything from editing to animation.

One of the key factors in its success has been the machine's ability to output a video-compatible sync signal which makes it perfect when used in combination with a genlock. Thanks to the aforementioned sync, overlaying Amiga graphics over live video is quite literally simplicity itself.

Because of this, titling and combining animation with live action are almost second nature. To achieve such effects in the home environment prior to the arrival of the Amiga was to say the least a tricky business.

Formerly this type of production required a PC with lots of additional hardware, including dedicated add-ons to provide a video-compatible signal containing the appropriate sync, plus a suitable sound card to supply the audio. And of course in order to actually genlock a signal you'd still need to add a genlock.

Fortunately the Amiga has all of these elements built-in – with the exception of a genlock – which means animation and Amiga-based audio can be sent straight to tape without any additional investment. Even the genlock isn't an essential when recording graphics courtesy of the Amiga's built-in/external modulator.

However for most video productions a genlock is often an essential, which even on the Amiga demands a little extra investment.

Assuming this is the case and you can't resist the opportunity to combine video with Amiga graphics, the most important element is to understand exactly how a genlock operates.

Essentially all it does is replace the first colour in the Amiga's register with the incoming video signal. In reality this means that anything painted using this register will appear transparent and allow the live video to show through.

However before going any further it's worth clearing up a common misconception. Although the first colour in the Amiga register is normally black, this doesn't mean you can't use black as part of your Amiga graphics.

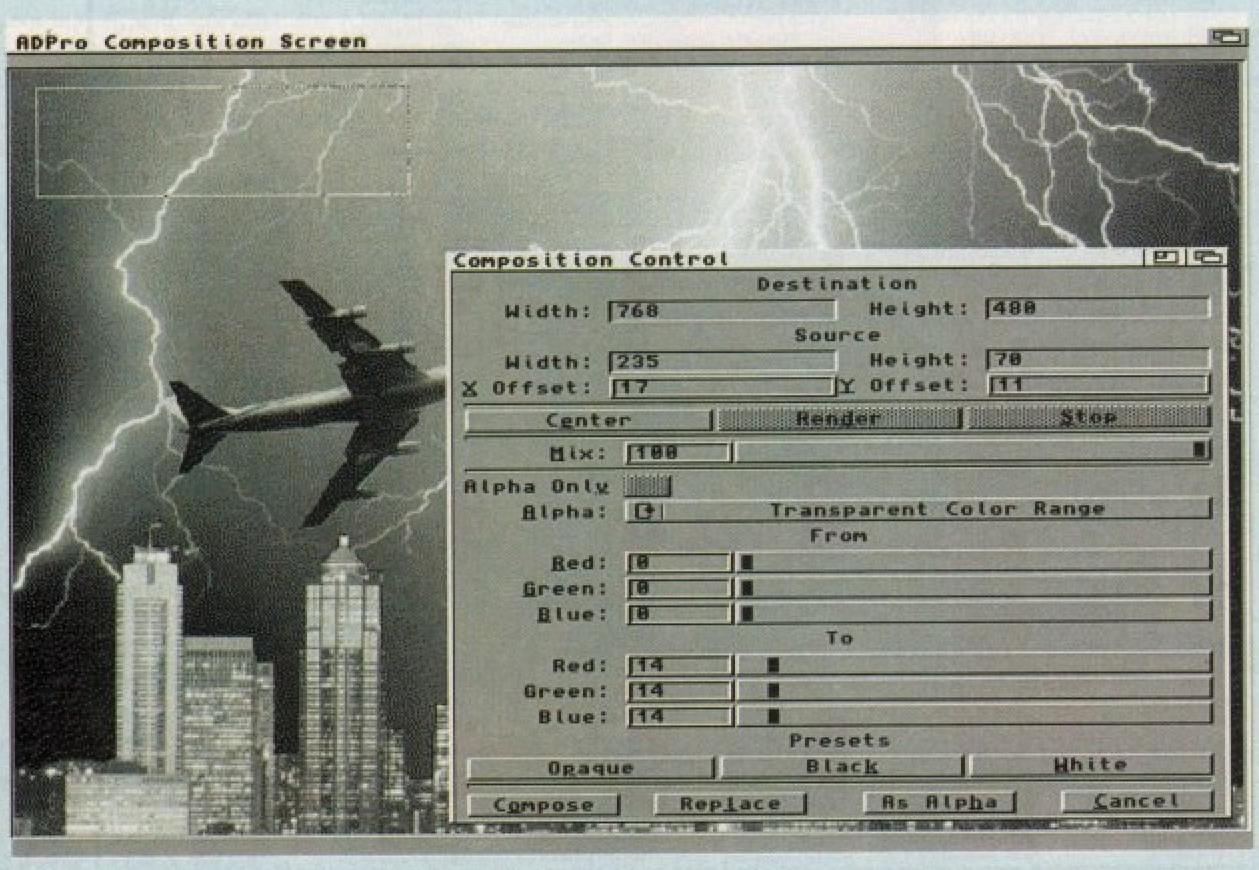
In order to use an identical colour you simply have to alter the colour of another colour pot elsewhere in the palette. The actual colour plays no part in the genlocking procedure; its position in the register merely determines which colours appear transparent.

Although the basic replacement of colour zero is the key to genlocking, it's only the beginning. In most cases a genlock will offer much more than a simple off/on combination of the two signals.

For example, the majority will also employ faders to allow dissolves between the two signals. As a result, it's possible to start with the video signal and then fade up the Amiga graphics – or vice versa.

And of course with the assistance of a genlock, this enables logos or animations to fade-up while leaving the colour zero areas of the image untouched.

If you're interested in recording Amiga animation without the video option there's yet another piece of hardware which could prove invaluable. Although it's possible to record direct



A soft touch

As you're probably well aware the Amiga market is quite literally fit to burst with video-compatible software. Fortunately almost every Amiga ever sold shipped with a copy of DPaint, which since time immemorial has been the most important tool for any videographer.

However even DPaint has its limitations – especially if your primary concern is titling. Fortunately, thanks to the machine's success as a titling environment, there's a huge range of titling software to suit just about every pocket, with products such as Scala HVT and The Big Alternative Scroller servicing the lower end while MediaPoint and MM300 provide the professionals with the ultimate in multimedia functionality.

Extra hardware

With the exception of the genlock – and of course the Amiga – there's very little else that could be classed as an essential. However that doesn't mean there isn't a huge array of potential add-ons.

Continuing in a genlocking vein, there's another hardware add-on known as a chroma keyer. Basically this works in a similar manner to a genlock but instead of replacing a colour in the Amiga's palette it will isolate a particular colour within the incoming video signal and replace this with computer graphics.

In professional studios this is known as a blue screen effect and is the driving force behind the so-called "weather man effects". Basically on the Amiga the choice of chroma keyers is very limited with perhaps the only affordable option being the RocKey from RocTek.

However be warned: Chroma keying requires pro studio conditions with ample lighting and appropriate backdrops, and even then the results can vary dramatically – definitely serious punter productions.

On a lower level come the hordes of assorted frame grabbers which can provide standard, 24-bit and AGA stills and in some cases sequential video sequences.

Obviously price and performance play a part, but if money isn't a problem VLabY/C stands head and shoulders above the opposition – especially if you're interested in sequential grabbing and optimum quality.

Another key aspect of video production is editing. If you can't edit your creations effectively you'll sacrifice almost all of the impact your amazing graphics may lend to the production. Nothing looks worse that scruffy cuts and sloppy transitions...

As a result some form of editing is essential. If you're lucky enough to have compatible VCRs/camcorders, most manufacturers offer built-in edit control either via direct edit cables or proprietary edit boxes.

However if you need additional help, EditMate from Meridian offers friendly – if slightly inaccurate – editing across a collection of assorted players and recorders.

to tape via the composite output of the modulator, the quality isn't exactly broadcast.

Fortunately there is an alternative in the form of a PAL encoder. Basically an encoder has one aim in life and that's to provide the optimum conversion from the RGB signal of the Amiga into either composite or S-VHS video.

Assuming you have the necessary hardware and are ready to record, there are a few essential working practices which will ensure you get the best possible results.

When working with composite/VHS video it's essentially that you avoid the problem of colour bleeding. Unfortunately due to the limitations of composite video it's vital that any Amiga-generated colours are either at or below 192 in the Amiga's colour range. For those new to the Amiga, the available range stretches from 0 to 255. However if you exceed 192 when sending Amiga graphics to tape, the colours will appear to bleed into their neighbours, producing a smudged or blurred image.

Unfortunately many Amiga packages use palette requesters that show the available registers in a scale from 0 to 15. In this situation never exceed 12 when compiling your images.

Even when these precautions are taken it's still possible to suffer from so-called hot colours. Fortunately there is a trick which can solve the problem – especially if your primarily interest is titling or animated logos.

Basically all you do is load the image into DPaint, select a dark colour as your pen and cut out the text or logo. Now select the Edge... Outline option from the brush menu.



At this point an outline should appear around the brush. If the line is too, thin simply repeat the process until you have a distinct edge on the text or logotype.

Essentially all this does is provide a border which will stop highly saturated colours bleeding and blending together. Obviously this is ideal for overlaid graphics, but what about full-frame computer graphics such as ray-traced animations?

In this situation the solution is slightly more expensive and involves investing in dedicated image processing package such as ADPro, ImageMr, or ImageFX – all of which provide advanced colour control. In the case of ADPro you're even provided with a dedicated broadcast limit operator which will automatically adjust the saturation and luminescence to the correct value for composite video.

Another habit worth adopting is blacking your master tape prior to recording. Basically all you do is create a completely black image in your favourite paint package and record this over the entire tape.

Although a seemingly odd pastime, it has a few very useful side effects. Firstly it automatically adds a sync to the tape which makes editing much easier later on in the production process. Secondly, and perhaps more importantly, blacking the tape dramatically reduces one of the perennial problems associated with video, namely drop-out.

Drop-out is a infuriating problem which appears as a sudden and sometimes dramatic drop in colour during playback. The problem usually rectifies itself after a few seconds but this usually makes even more noticeable.

Hopefully blacking the tape beforehand should go a long way towards eradicating the problem. Finally when your tape is ready to roll, always start recording a few minutes into the tape, as this allows the tape to stabilise which again improves editing and minimises drop-out.

Moving on up

Animation again is one of the Amiga's strong points with a profusion of ray tracers and renders available to supplement DPaint/Brilliance productions. Essentially any buying decision should revolve around a combination of usability, realism and application.

If your primary interest is corporate logos and general presentation work, Caligari24 is a real bargain at just £99. Being ideal for those who aren't necessarily interested in the finer points of ray tracing and photo-realistic output, it's an ideal choice.

However, if you're harbouring aspirations towards state-of-the-art animation in the style of *SeaQuest or Babylon5*, you'll need a power package such as Lightwave, Imagine3.0 – when available – or Real3D v2.

With any one of the above you can produce truly outstanding graphics. However, in order to record the end results you'll need to make a few compromises to achieve respectable playback speeds.

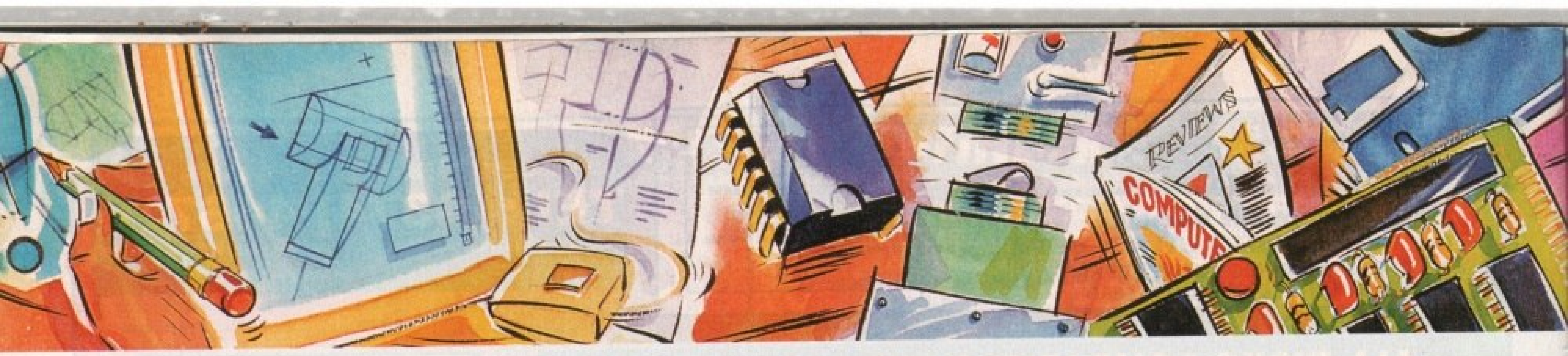
Unfortunately even an Amiga 4000/040 can't play full frame animation without sacrificing resolution and colours. As a result, forget any ideas about hi-res Ham8 interlaced productions, as such images will never animate properly.

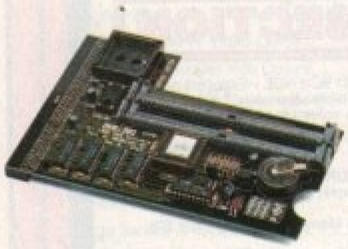
Instead there are two options. You can use smaller images and perhaps centralise them to create a window effect, or use full frame lo-res interlace images.

Unfortunately on slower machines even these images may not animate quickly enough. As a result, image processing can prove invaluable...

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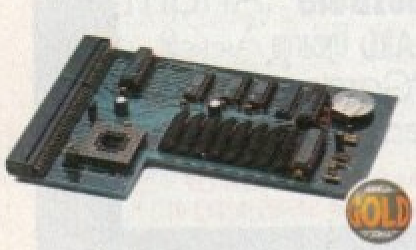
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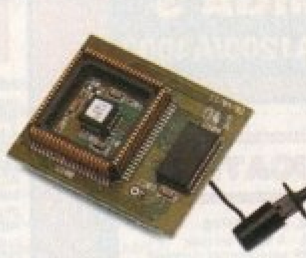
PC1204

The original PC1204 4MB 32-bit memory expansion is still available, and is exceptional value.

PC1204 + 68882 50MHz £319.95

Home Music Kit

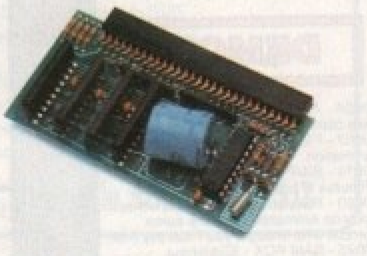
Midi Interface £15.95
Home Music Kit £29.95



MegaChip Ram

Increase your Amiga 500/2000 chip RAM to a total of 2MB. MegaChip does this by using its own 1MB of RAM and drawing extra memory from any other RAM you have installed in your Amiga. No soldering is required.

MegaChip RAM £159



A500 Memory

A 4-chip 512K RAM expansion with a battery backed clock. Free software included. (A500+ compatible)

A500 Card with clock £29

A500 8MB

Expand your Amiga 500 from 2MB to 8MB of RAM. Plugs into the side slot, full auto-config, and through port.

2MB Board £139
4MB Board £219
8MB Board £299

Memory Expansions

We manufacture a vast range of memory cards for the Amiga 500, 500+, 600, 1200, 1500, 2000, 3000 and 4000. Please telephone us for prices and availability.

DKB 3128

Up to 128MB of RAM on your Amiga 3000/400 using 4,8,16 and 32MB Simm modules. This is a true Zorro III 32-bit memory board.

DKB 3128 0MB RAM .... £POA

Octogen SCSI-2

SCSI-2 board for the Amiga 2000 including memory expansion capabilities of up to 8MB.

Octogen SCSI-2 .... £129



DKB 4091

The DKB 4091 (licensed by Commodore) SCSI Host Adaptor is a high performance board that connects up to seven SCSI devices to your Amiga. The DKB 4091 features: Full Zorro III implementation, fast SCSI-2 implementation, SCSI internal connector and ribbon cable, high density SCSI-2 external connector, direct memory access (DMA) and hardware to install a 3.5" hard drive on the board.

DKB 4091 .... £399.95



Video Backup

Use a VCR as a backup storage device. Two hundred Amiga floppy disks fit on to a 4Hr tape which can be used for an alternative hard disk backup system. What's more you can now watch television on your 1084s monitor. A Scart or Phono version is available.

Video Backup Scart £65
Video Backup Phono £60

GVP Products

Power Computing are now one of the official distributors of GVP 'High end professional' hardware and software.

Image FX- Colour image processing £100
EGS Spectrum 24-bit card (2MB)... £389
G-Lock (PAL video genlock) £299
HC8+ SCSI controller.................. £129

Hard disks available from 52MB to 1GB

Co-processors

All maths co-processors include crystals.

20MHz £40
33MHz £69
40MHz £89
50MHz (PGA) £154



Epson Scanners

The GT-6500 and GT-8000 24-bit colour flatbed scanners from Epson scan up to A4 in size, with output resolutions of up to 1200DPI on the GT-6500 and 1600DPI on the GT-8000 in colour or greyscale. The scanners include PowerScan or Image FX image software. (Image FX + PowerScan £100, only when you purchase a flatbed scanner)

Epson GT-6500 PowerScan £659
Epson GT-6500 Image FX £759
Epson GT-8000 PowerScan £1099
Epson GT-8000 Image FX.......... £1199
Document Feeder £399



PowerScan 4

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PowerScan 4 (Mono) £119
PowerScan 4 (Colour) £239
PowerScan 4 inc. OCR £159
PowerScan 4 upgrade interface £50
PowerScan 4 upgrade software........... £20
OCR Junior Software........................ £49
OCR Full version upgrade £49
(OCR full version only available to registered users of OCR Junior)

PowerScan IBM

For those who own an Amiga and IBM PC XT/AT it is now possible to use your PowerScan for both computers. The scanner includes 256 grey-scales, 100-400 DPI resolution, scan kit for Windows, OCR software and merge function for the quick and easy joining of two partial images.

IBM interface & software £49.95

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Stephen Bathgate
Managing Director

Mat Broofield CU...Value for Money, "no other digitiser comes close."

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The Vidi-Amiga is one of the greatest graphics products to appear on your favourite computer....its obviously going to be one of the really top Amiga products of 1994."

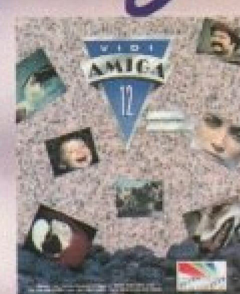
GOLD JULY 1993

The Vidi Range

AUI AWARDED 98% FEBRUARY 1994



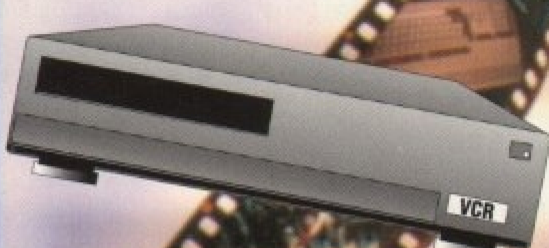
Vidi Amiga 12 is our entry level digitiser. Perfect for someone who's getting involved in video capture for the first time. This model captures mono pictures in real-time, colour in less than a second.
Software includes an Animation Workstation and powerful Image Processing grabs pictures in 4096 colours and 16 greyscales. Comprehensive file support includes BMP, Tiff, IFF, ANIM etc. Fully compatible with all Amiga's.



£99.95

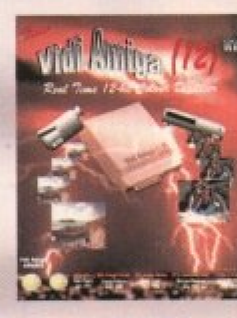
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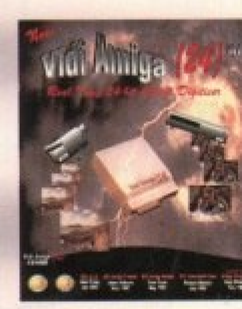
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